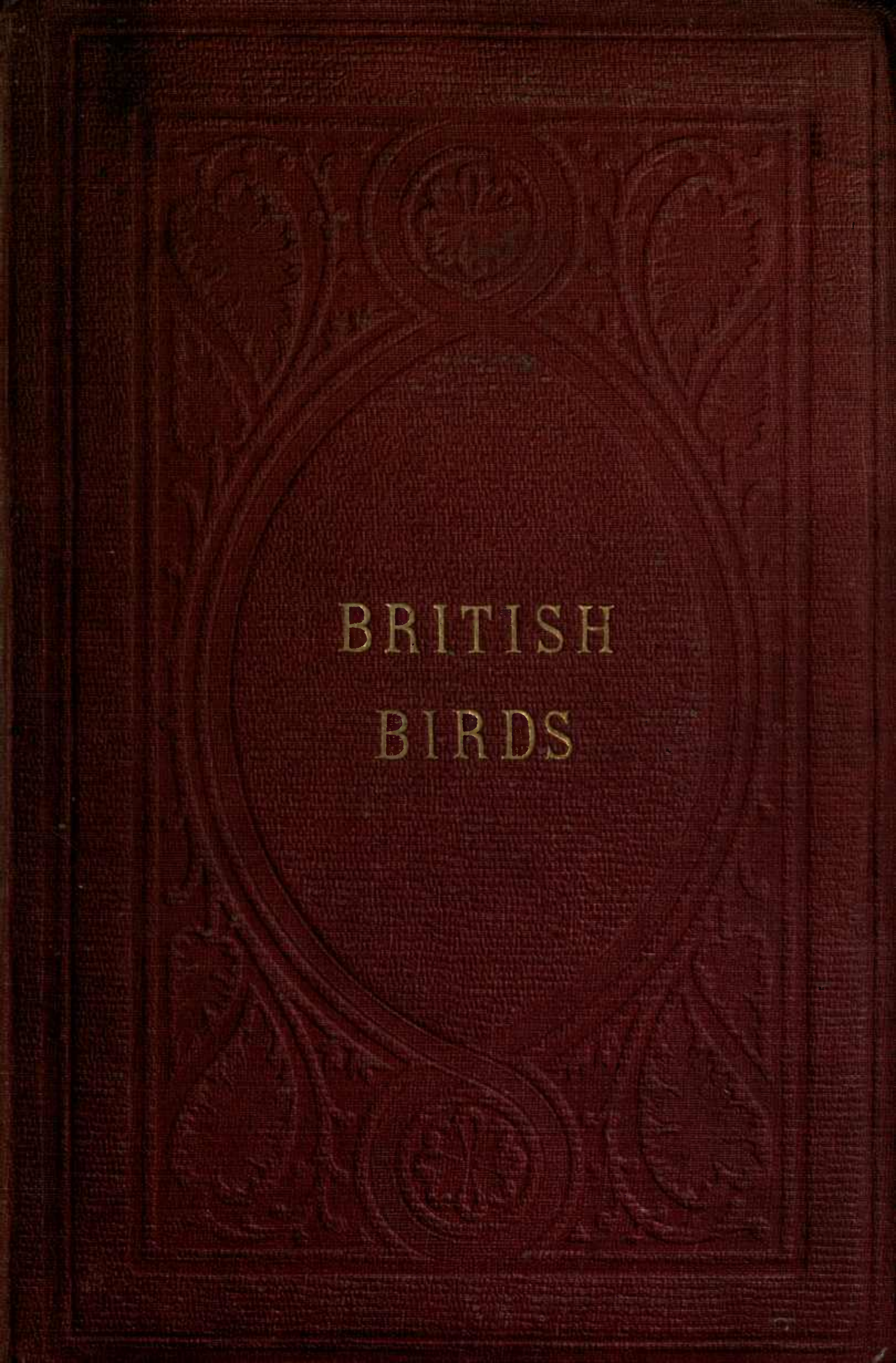

# BRITISH
# BIRDS

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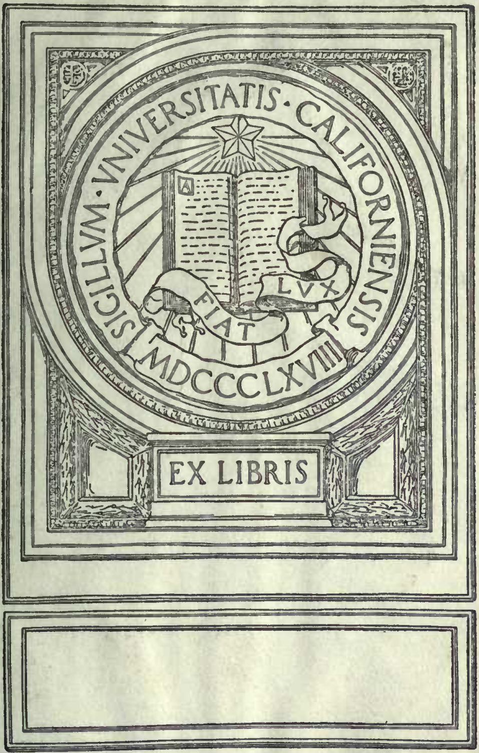
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# A
# HISTORY
# OF
# BRITISH BIRDS.

BY

THE REV. F. O. MORRIS, B.A.,

MEMBER OF THE ASHMOLEAN SOCIETY.

VOL. VII.

CONTAINING FORTY-TWO COLOURED ENGRAVINGS.

*'De profundis ad Dominum.'*

LONDON:
GROOMBRIDGE AND SONS, 5, PATERNOSTER ROW.

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OF

# THE SEVENTH VOLUME.

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# HISTORY OF BRITISH BIRDS.

---

## GADWALL.

### GADWALL DUCK. COMMON GADWALL.

| | |
|---|---|
| *Anas strepera,* | PENNANT. MONTAGU. |
| *Chauliodus strepera,* | SELBY. |

*Anas*—A Duck. *Strepera*—A factitious word from *Strepo*—To rustle.

THIS is a rare species with us, but specimens are obtained now and then throughout the country.

On the continent of Europe it is met with in Spain, France, Italy, Holland, Switzerland, Denmark, Germany, Norway, and Sweden, as also in Iceland. On that of Asia, in Siberia, India, the country near the Caucasus, China, Japan, and Persia. In Africa likewise, in the northern parts; and in America, from the fur countries through the United States to South Carolina.

In Yorkshire, two were obtained on the Humber, about the 10th. of March, 1851; others near Doncaster. It has been met with, but rarely, near York, and also at Swillington, the seat of Sir John Lowther, Bart., near Leeds. In Norfolk, two or three used to be shot every year near Yarmouth, on Breydon. Two were on sale in the Cambridge market, on the 25th. of February, 1824. One, of which Mr. M. C. Cooke has informed me, was obtained in the vicinity of Ingham, in Norfolk; the Hon. T. L. Powys mentions the occurrence of the species in Northamptonshire. In Cornwall, it has been met with at Gwyllyn Vase, near Falmouth. In Oxfordshire, a male was procured in January, 1833; and in the following year a female, near Standlake; others in other parts of the county.

In Ireland, it has been obtained near Limerick, on the River Shannon, and in other instances.

In Orkney, it has been shot at times in Sanday, but is not a regular visitant.

'The localities preferred by the Gadwall are inland lakes, large boggy flats, and ponds that are well covered with reeds, osiers, and long herbage. During the day this species frequents extensive open waters, but towards the dusk of evening it becomes restless, and goes in search of the lonely spots before mentioned, for the purpose of feeding, and the enjoyment of quiet and undisturbed recreation.' It seldom visits the sea-shore.

It changes its quarters in September and October, and in March and April; in the former months for the south, and in the latter for the north. They migrate during the night.

It is said to be of recluse, shy, and wary habits, but sociable among its own species. It is a good bird to eat.

It flies quickly and with strength, and is alert in all its movements. It swims and dives well, and Meyer says, if pursued, clings to the weeds under the water. He adds, that if a family or small party of Gadwalls fly about, they keep close, but not in a line, and on alighting they disperse over the ground, and when taking wing, do so with more alertness than most other ducks. They thrive well in confinement, and have laid in the gardens of the Zoological Society.

These birds feed on water insects and their larvæ, small fish, and frogs, as also on plants, seeds, and grain of various kinds, and grass. They chiefly seek their sustenance during the day, on the water, and dive the head under to procure it, but also near the water's edge in moist places.

The note is only the usual quack, seldom reiterated more than twice at a time.

The nest of the Gadwall is placed among reeds, sedge, rushes, or other aquatic herbage, such as vegetates by the sides of pools, meres, and lakes, and in marshy spots 'with verdure clad.' It is composed of dry grass, and the eggs are covered with down.

The eggs are from five to seven or eight, or, Selby says, ten or twelve in number. They are of a uniform buff white colour.

Male; length, about one foot seven inches. The bill, which is flat, is lead-colour, blackish towards the tip; after the summer moult, dusky, with orange about the base; iris, brown. Head, crown, neck on the back, and nape, light greyish brown, thickly speckled with darker brown, lighter after the summer moult; the crown has a tinge of yellowish; in front and on the sides the neck is grey, each feather tipped with a semicircle of a paler shade of the same colour. Chin and throat, greyish white, finely speckled with brown; breast above, brown, marked with crescent-shaped white lines on each feather, on the lower parts becoming gradually broader, assuming a spotted appearance; the sides beautifully variegated with short lines of grey of two shades; below, the breast is white in front. Back above, grey, a series of darker and lighter-coloured lines; below, dark brown, with broad yellowish margins to the feathers, some of them nearly black; after the summer moult, brown, with dusky centres to the feathers.

The wings expand to the width of two feet nine inches. Of the greater wing coverts half are velvet black, and the others white, but greyish brown after the summer moult; lesser wing coverts, grey, marbled with yellowish white; the middle ones chesnut brown, varied with orange brown; the tips of the feathers nearest to the speculum broadly bordered with black, the upper rows grey; after the summer moult, greyish brown. Primaries, almost black, dusky after the summer moult, and lightest at the base of the feathers; secondaries, also nearly black, the speculum is a tricoloured bar of purple red, black, and white, except the four first feathers, which are grey at the base and black at the tip; after the summer moult it is dull white. Tertiaries, brownish yellow grey, the margins paler grey. Tail, brownish grey, the edges of the feathers paler—yellowish white; the two middle ones are pointed, making it wedge-shaped; the side feathers black. Upper tail coverts, bluish black with a tinge of purple green, white after the summer moult; under tail coverts, bluish black, tinted with green. Legs and toes, orange red, less bright after the summer moult; claws, black; webs, dusky orange red.

The female has over the eye a light streak intermixed with black; head on the crown, glossy black, mixed with greyish white; on the sides, yellowish white streaked with brown: neck on the back, pale brown, spotted with dark brown; in front marked with alternate crescent-shaped bands of dark and pale brown, wider than in the male. Nape, brown, the feathers edged with a paler shade; chin and throat, white; breast, pale buff brown, with dusky spots on the feathers. Back, deep dusky brown, the edges of the feathers paler and of a rusty yellow or pale buff colour. Lesser wing coverts, greyish brown, the edges paler; the speculum dull white. Tail, dark brown, the edges and tips of the feathers pale buff, brown, and white.

Yarrell says that the young birds of the year are 'of a more uniform reddish brown colour above, speckled with dark brown; the middle of each feather also dark brown.'

The plate is taken from a drawing by John Gatcombe, Esq., of Wyndham Place, Plymouth.

# PINTAIL.

COMMON PINTAIL. PINTAIL DUCK. CRACKER.
SEA PHEASANT. WINTER DUCK.

| | |
|---|---|
| *Anas acuta,* | PENNANT. MONTAGU. |
| *Querquedula acuta,* | SELBY. |
| *Dafila caudacuta,* | GOULD. |

*Anas*—A Duck. *Acuta*—Sharp.

In Europe this bird is said to be common in Lapland, Russia, Norway, Sweden, Holland, Germany, and France; occurring also in Spain and Italy. In Asia it has been seen in Siberia, Tartary, Japan, China, Asia Minor, Persia, and the vicinity of the Caspian Sea. It belongs also to North America, and is found from Hudson's Bay and Canada to the United States, Florida, and Mexico.

The Pintail has been met with in Yorkshire, at Walton and Scarthingwell, and also near York. It occurs, but rarely, on Croxby Lake, Lincolnshire, as the Rev. R. P. Alington has informed me; also at times in Northamptonshire, the Hon. T. L. Powys says. In Cornwall one was shot at Pennance Point, near Falmouth, in the year 1846; and a second at Swanpool, in 1847. In Derbyshire it occasionally is seen on the Trent; also in Cambridgeshire, Dorsetshire, Devonshire, and Hampshire. In Norfolk, not uncommonly near Yarmouth.

This species has been known to pair with the Common Duck, and a specimen of the progeny was exhibited before the Zoological Society, in 1831, by the Hon. Twisleton Fiennes; also with the Scaup, the Mallard, and the Bernicle. Lord Stanley had a female Pintail which paired with a Wigeon, and had eggs two successive seasons.

In Scotland one was observed on the River Deveron, near Banff, in Aberdeenshire. Others have been noticed both in pale brown, rather darker in the male. [illegible] edged with a paler shade; chin and throat, white; breast, pale buff brown, with dusky spots on the feathers. [illegible] they dusky brown, the edges of the feathers [illegible] cream yellow or pale buff colour. Legs [illegible] brown, the toes paler; the [illegible] brown, the edges and tips of the feathers [illegible] and white.

Yarrell says that the young birds [illegible] more uniform reddish brown colour [illegible] brown; the middle of each feather [illegible]

The plate is taken from a [illegible] Esq., of Wyndham Place, Plymouth.

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In Scotland one was observed on the River Dovern, near Banff, in Aberdeenshire. Others have been noticed both in the north and south of North Britain, but not many. In Orkney it is pretty abundant in various parts, but especially in Sanday, where it is seen both on the sea and fresh water.

In Ireland it is recorded by Mr. Watters, Junior, as having occurred in the county of Louth, and other localities commonly. In Wales it is also known; and in the Faroe Islands.

The haunts of the Pintail are the reedy borders of fresh-water lakes, rivers, and ponds: it is rarely seen on the sea-coast.

These birds move southwards in October and November, and northwards in March or April, earlier or later according to the forwardness or backwardness of the season. At the time of migration they are sometimes seen tarrying by the border of some retired bay or estuary, but for the most part in more inland situations; keeping by day, for the purposes of feeding or resting, on large sandy flats or the open water, and at night coming in to more circumscribed places.

The Pintail is in much estimation for the table. They assemble in the winter in small flocks, and are by no means shy. Considerable numbers are taken annually in the decoys of Lincolnshire, Norfolk, and other counties. They do well in confinement. The parent bird shews much solicitude for her brood, and will remain on the nest, it is said, even to the last moment, if a supposed enemy approaches.

They seldom dive. When rising, on a sudden alarm, they cluster confusedly together.

They feed on the seeds, roots, and leaves of various plants that grow in shallow water, corn, beetles and other insects and their larvæ, small frogs and fish, worms, snails, and mollusca generally. Sir William Jardine shot two feeding in a stubble field. They are said to be particularly fond of beech-mast.

Their note is described as being soft and low during the season of courtship, and it is accompanied by various bowings and tossings of the head. A louder chattering noise is also made.

They appear, in some instances at all events, to be late in breeding. Mr. Dann saw a large flock of both males and females on the 1st of July, 1838. The usual time seems to be the month of April.

The nest of this species is placed by the margin of, or at no great distance from, water, lakes, ponds, and seas, and is composed of grass and reeds, with a little lining of down. Some have been found in ditches, and even in standing corn: it is always well concealed.

From six to eight or nine eggs are laid. The young are hatched in about twenty-three days. They at once repair to the water.

These birds have repeatedly bred in confinement. Montagu has recorded several instances.

The winter plumage is as follows:—Male; weight, about twenty-four ounces; length, from two feet two to two feet four inches. The bill, which is rather long, brownish black at the base, and on part of the tip, the remainder and the sides, leaden grey; iris, yellow; head on the sides, crown, neck on the back, and nape, rich dark brown, with a tinge of purple red, and mottled with small dark spots. From the back of the head there descends, on the sides of the neck, a white stripe, which widens as it goes down, and extends down the lower part of the front of the neck and the upper part of the breast. The neck is long and slender. Chin and throat, also rich dark brown, the latter mottled with small dark spots; breast above, white, as just mentioned, the middle and sides grey white, transversely lined with fine black pencillings, below white. The back is of a neat grey hue, the result of a series of alternate waved lines of yellowish or greyish white, and bluish black, the upper part is darker than the lower, the lines on the latter being more freckled, less distinct, and paler.

The wings have the first quill feather the longest. Greater wing coverts, greyish brown, tipped with white and reddish buff; lesser wing coverts, fine grey, produced by alternate waved lines of greyish white and blue black; primaries, dusky greyish brown, the shafts broad and pale; secondaries, black; the speculum or beauty spot, dark bronze, edged with black, which again is green, tipped with white and with a reddish tint near the shaft; it is formed by these colours on the outer web and tip of each feather; tertiaries, long and pointed, the centre of each deep black, the outer web edged with white, the inner one with grey, or yellowish grey. The tail has the middle feathers three inches long, and black, slightly glossed with green; the others dark dusky brown, margined with white; under tail coverts, deep velvet black. Legs and toes, small, and blackish slate brown; webs, blackish slate brown.

The male bird assumes the plumage of the female in the summer.

In the female, which is less than the male, the bill is slate-colour. The forehead and head on the crown, light reddish brown, speckled, or rather streaked, with very dark brownish black; sides of the head, pale dull yellowish, speckled with black; neck, pale brown, speckled with very dark brown; the white list is wanting. Chin and throat, cream-colour; breast, dull white, obscurely spotted with brown, on the sides dusky brown, the feathers barred and tipped with white, below it is cream yellow, irregularly spotted with brown. Back, dark brown, the feathers being nearly black in the middle, and pale brown or yellowish white on the edges. Greater and lesser wing coverts, pale purple brown, with margins and tips of white. Primaries, dusky brown; the secondaries have the speculum brownish bronze green, with white tips to the feathers; tertiaries, dusky brown, margined with white. The tail is long and pointed, dark brown, varied with imperfect bars of pale brownish yellow and white, the two middle feathers are only about half an inch longer than the others; under tail coverts, white, with chesnut brown spots. Legs and toes, brownish grey; webs, brownish grey.

A duck of this kind, a male, kept in confinement, as presently mentioned, did not exhibit the summer change of plumage, but an 'Exceptio probat regulam.'

In the young the white of the breast has a yellowish tinge.

Yarrell writes as follows on the subject of the fact alluded to:—'The males constantly undergo that remarkable summer change in their plumage, which renders them for a time more like the females in appearance than any other species in which the change is observed. This alteration commences in July, partly effected by some new feathers, and partly by a change in the colour of many of the old ones. At first, one or more brown spots appear in the white surface on the front of the neck; these spots increase in number rapidly, till the whole head, neck, breast, and under surface have become brown. I have seen a single white spot remaining on the breast as late as the 4th. of August, but generally by that time the males can only be distinguished from females of the same species by their larger size, and the beak remaining of a pale blue colour; in the female the bill is dark brown. I have seen a male Pintail confined in the hutch of a dealer throughout the summer, that did not exhibit any change at all.'

The following is Montagu's description of a male Pintail, after he had thrown off the masculine plumage, taken on the 19th. of August:—'Bill, as usual; top of the head, and from thence down the back of the neck, dusky and pale ferruginous, intermixed in minute streaks, paler on the forehead; sides of the head and throat, brown, with minute dusky specks, tinged with ferruginous; the front and sides of the neck, brown, with dusky black spots which are minute on the upper part, becoming larger by degrees downwards, where they are also more distinct, the breast very pale brown, with more distant dusky spots; the back and scapulars are only black, with pale margins, each feather having a transverse bar of white near the tip; the longer scapulars are only margined with rufous white, and some are powdered with white. As they approach the tail the feathers gradually lose the white bar, so that the tail coverts are only margined with white; the feathers on the sides of the body being large, have broad margins, with the middle dusky black, in which is either a ferruginous white bar, or two spots, one on each side of the shaft; the prime quills dusky grey, as usual; the speculum changeable green, or copper, tipped with white; a violet bar dividing the green from the white. The first tertial is brown on the inner web, grey on the outer, near the shaft, and a broad margin of violet; the rest of the tertials are brown, dashed with cinereous black near the shafts; the coverts of the wings plain dark cinereous, the larger series tipped with bay; the tail consists of sixteen dusky feathers, dashed with cinereous, gradually becoming darker towards the middle feathers, which rather exceed the rest in length, making the tail regularly cuneiform; vent, and under tail coverts, rufous white, with distant black spots.

At the annual autumnal moult, the males again assume, with their new feathers, the colour peculiar to their sex, but the assumption is gradual. White spots first appear among the brown feathers on the front of the neck; by the end of the second week in October the front of the neck and breast are mottled with brown and white; at the end of the third week in October a few brown spots only remain on the white.'

# WILD DUCK.

COMMON WILD DUCK. MALLARD.

| | |
|---|---|
| *Anas boschas,* | PENNANT. MONTAGU. |
| " *fera,* | BRISSON. |

*Anas*—A Duck. *Boschas*—............?

THE Wild Duck is common over the continent of Europe, from Norway and Sweden. It is found also in Asia, even to Japan; and in America, from Labrador, Behring's Straits, and Newfoundland, to the United States; but in the latter is rare. Farther south, however, they are said to become more common again, and in Florida to be exceedingly abundant.

Mr. Thomas Allis, of Osbaldwick, near York, thus writes in his 'List of Yorkshire Birds,' of the present species—'Of rare occurrence near Halifax and Hebden Bridge, not uncommon about Barnsley, frequent in the vicinity of Sheffield and Doncaster; it occurs near Huddersfield, is occasionally seen about Leeds; it is common about York, and breeds in several localities in the neighbourhood; it is met with at Pilmoor, near Thirsk.' Arthur Strickland writes, 'in the year 1800 the Act for the Beverley and Barmston drainage was passed: in this Act compensation for the destruction of the two principal decoys in the county was provided for, and which necessarily took place soon after the drainage of the country. These were the decoys of Watton and Scorborough. Two other decoys, those of Home and Meaux, probably ceased to be used about this time also. I am informed that at the decoy of Watton only, which had a range of upwards of a thousand acres of water, nearly four hundred Ducks have been known to be taken in one day. We may imagine the change in these matters in a country where now only a few dozen birds fall by the gun in the course of a winter.

In Cornwall, the Wild Duck is not uncommon near Falmouth.

In Ireland it is plentiful.

Watery districts, ponds, lakes, rivers, and streams, are the natural resorts of these birds.

The Wild Duck is a resident throughout the country, but even in Orkney large flocks arrive in the autumn from still more northern regions. 'In the extreme north the Mallard is a migratory species, in the temperate climes indigenous, and in the southern a winter visitant.'

The time of movement from the north begins in the month of October, and continues throughout November. 'During this time the flocks that pass over are immense, both with respect to number and extent. These migrations are chiefly performed during the night, but at times, when circumstances hurry them on, they continue the route during the day. The manner in which they fly is in the form of a slanting line, as if broken in the centre. When the journeys are to short distances, they are performed in similar manner, following the course of the water or of low wet grounds, and they sometimes fly in a confused low mass over the ground.'

Bishop Stanley writes—'Ducks too, like Geese, have a strong sense of affection. We cannot, indeed, produce instances so striking or so interesting as those related of the latter, but the two following instances show a similar tendency towards animals as well as human beings:—

A clergyman had a very fierce and surly house-dog, within the length of whose chain it would have been dangerous for a stranger to have ventured; but, notwithstanding this apparently savage disposition, a brood of ducklings, reared in the yard in which he was kept, soon became so fond of him, that whenever, from his [illegible], they apprehended danger, they would rush towards him for protection, and seek shelter in his kennel.

A farmer's wife had a young Duck, which by some accident was deprived of its companions, and from that moment seemed to concentrate all its affections on her. Wherever she moved it followed her so closely that she was in constant fear of treading upon and crushing it to death. As it grew older its affection seemed to strengthen rather than diminish; it laid itself by the fire and basked on the hearth, and when

# WILD DUCK.

## COMMON WILD DUCK. MALLARD.

| | |
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A clergyman had a very fierce and noisy house-dog, within the length of whose chain it would have been dangerous for a stranger to have ventured; but, notwithstanding this apparently savage disposition, a brood of ducklings, reared in the yard in which he was kept, soon became so fond of him, that whenever, from his barking, they apprehended danger, they would rush towards him for protection, and seek shelter in his kennel.

A farmer's wife had a young Duck, which by some accident was deprived of its companion, and from that moment seemed to concentrate all its affections on her. Wherever she moved it followed her so closely that she was in constant fear of treading upon and crushing it to death. As it grew older its affection seemed to strengthen rather than diminish; it laid itself by the fire and basked on the hearth, and when noticed, seemed delighted; this continued till some other Ducks were procured, when, being constantly driven out of the house, it gradually associated itself with its more natural companions.'

The following occurs in the 'Naturalist,' vol. iv, page 43, from the pen of John Dixon, Esq., of Leeds:—'A nest of this shy bird was found by a lad amongst a clump of sedge near the Eccup reservoir; he took the eggs home, and out of curiosity they were set under a Domestic Duck, and in process of time all hatched. The young brood seemed to take very kindly to their foster-parent, and grew remarkably tame, which lasted until they were well fledged, when their natural wildness appeared to be slowly returning. The company of their domestic congeners was now too tame for them, and they generally kept to themselves, paying frequent visits to the not-far-distant reservoir, but always returning to the farm-yard; a sudden noise, or the presence of dogs, etc., would start them up, and away they would go again for the still waters. This continued until one day a gun was discharged very near them, when one and all took to their wings and never afterwards returned. I believe that many attempts have been made to restrain the natural wildness of this beautiful bird, but I can hear of no instance where the experiment has been perfectly successful in reconciling it to domestic life. While writing this, the recollection of another curious circumstance comes fresh to my memory.

During a visit to some friends at Wiston, many years ago, I was often amused with the eccentricities of an old Goose, who had seemingly forsaken his own kindred, and formed a friendly alliance with a flock of Ducks, in the midst of which he was always to be found, either afloat or ashore, indeed any approach to his own tribe generally met with a rebuff; but he was of a peaceable turn, and not the Goose to pick up a questionable quarrel, so these insults were never retaliated but by a hiss. On inquiry into this strange friendship, I was given to understand that the venerable Goose had been hatched under a Duck, whose motherly kindness he still evidently cherishes, in the fact of his sticking to the family group ever after, in the midst of which he probably still maintains a conspicuous place.'

The Wild Duck, like so many other birds, evinces great anxiety for her young if approached by any hostile, or supposed-to-be-hostile, intruder, scurrying and flapping along the surface of the water to some distance, as if to court pursuit, and then taking wing, the young having in the meantime hidden themselves away. In frosty weather, flocks of Ducks huddle together on the ice, or assemble together on the open sea, or in some field near to their accustomed haunt, prepared to notice, and to take advantage of, the first symptom of change in the weather which sooner or later must come. Vast numbers of these birds are taken every year, and far greater numbers used to be taken in decoys, 'they being,' as Izaak Walton says of the Perch, 'like the wicked of the world—not afraid, though their fellows and companions perish in their sight.'

In its wild state the Mallard is monogamous, but the domesticated male birds are polygamous. It need hardly be mentioned that they, the former, to say nothing of the latter, are excellent for the table. The young are called Flappers.

Sir William Jardine writes as follows:—'After the young have received complete first plumage, the whole again begin to congregate, and to frequent at the time of rest some chosen piece of water or large morass, where they remain during the whole day, making excursions morning and evening to various feeding-grounds. These differ according to the season; a river, if near and at all secluded, is much frequented; in autumn, the fields of grain are flocked to at dark, and when the crop has been laid, are selected for a spot to alight upon. Extensive holmes or valleys are much frequented, particularly if water be in the vicinity, to which, for a time, they can retire after feeding. As twilight approaches they may be seen by the watcher, early in the night, coming from the points where he knows the daily resting-places are situate. They at first fly round in circles, gradually lowering and surveying the ground around; but as the night advances, they fly straight to the spot and alight at once.

Many years since, when Wild Ducks were much more abundant, we have shot them by watching among the ripe grain. As the season advances, the stubble-fields are selected, and more particularly if the ground is at all moist, or is liable to be occasionally flooded, and the water continues standing in the furrows; in these situations they are able to find the grain, and by the sensibility of their bill-apparatus, to separate it from the water and foreign substances.

When winter ensues, and their resting-place is perhaps frozen, they have to seek for water in the springs and ditches which do not freeze, and in the rivers which are generally partially open, assembling in small parties or flocks; but in severe seasons they are often driven to great extremity, but we do not think that the individuals belonging, as it were, to a district, migrate far, or seek the coast. In a locality not more than twelve miles distant, we have rather seen an increase than the reverse at such times, and in one or two winters of unusual severity which have occurred within the last twenty years, where almost every pool or hole was either entirely blown up by snow, or frozen, we have seen the Wild Duck, (generally so shy) so reduced as to seek for any greener spot in a field, or the least open part of a ditch, and, if disturbed from these, merely fly around, or to a short distance, until the cause of annoyance had been removed, their bodies being at the same time completely emaciated.

Upon the sea-coast there is always a considerable number to be found during winter and in severe weather, but bearing no proportion to the large flocks of Wigeon and some of the true sea Ducks; these we conceive to have been either birds which have migrated from another country, or those which belonged to the district in the immediate vicinity of the coast, and they have resorted to the sea more as a resting-place than for food, preferring at all times to seek it inland, unless when the severity of the weather has completely shut up all their accustomed sources.'

On the water they are most at home, and there, if you can watch them, yourself unobserved, in their natural haunts, you will see them in every variety of posture, attitude, and occupation;—some idly floating about on the still surface; others asleep, or half-asleep, the head turned back and the bill pillowed among the plumage; others ducking and diving in joyous sport; here one lying on its side and basking in the sun, and there another standing on the bank and preening its feathers into trim array.

They make their food of grain, worms, slugs, small fish, land and water insects, and these latter they snatch at and catch on the water, or pick up at times, especially in dull humid weather, on the dry, or to speak more exactly, on the moist land. They also eat the leaves of various plants and grain.

As the day wears away towards evening, before, and as if making arrangements for, their departure for the night, Wild Ducks set up a clamorous gabbling, the female being both the loudest and most incessant in her conversational powers.

When the debate has ended, the whole flock take wing in separate parties, and return again in like manner soon after dawn the following morning.

They are believed to remain in pairs throughout the year, and the young birds to choose their mates before the anniversary of their first summer.

The nest of this species, constructed the latter end of April, is placed, unless in a few rare exceptional instances, some of which will presently be mentioned, on the ground in a dry place, often near, but on the other hand not unfrequently at a distance from water; in some cases under a hedge, and in others in an open field, or in a wood, but under shelter of some kind; sometimes in marshy spots. It is small in size, little more than six inches in the inner width, and regularly formed of dry grass or other vegetable materials; the lining being down, to the thickness of between two and three inches.

As Mr. Hewitson observes, 'We should scarcely expect to find the nest of the Wild Duck in a tree, and yet several instances have occurred in which it has chosen for itself a site thus elevated, and apparently uncongenial to its usual habits. Mr. Tuke has met with a nest of this species in the grounds of Castle Howard, in a large tree, twenty-five feet above the ground, and fifty yards from the edge of the water. Mr. Tunstall speaks of one at Etchingham, in Sussex, which was built in an oak tree twenty-five feet above the ground, and contained nine eggs; and Mr. Selby says that a Wild Duck laid its eggs in the nest of a Crow, at least thirty feet from the ground.' Others have been found at a height of ten and eighteen feet.

In Daniels' 'Rural Sports,' mention is made of the deserted nest of a Hawk, in a large oak, having been appropriated by a Wild Duck; and Montagu speaks of one built between the trunk and the boughs of a large elm tree, and of another in a willow tree overhanging some water. Meyer mentions one found by him on the stump of an old willow tree; and G. B. Clarke, Esq., in 'The Naturalist,' volume i, page 116, one built on the fragment of a broken branch of an oak about twelve feet from the ground, and a foot and a half from the trunk. Another was found at Thornton Abbey, in Lincolnshire, near the top of a large ivy-covered ash tree; another in an old ruin. Sir William Jardine mentions one built on the top of a precipitous rock, and Audubon one in the middle of some corn, a mile from any water.

The greater number of these birds go north to breed, but not a few remain here and there throughout the country all the year, and build.

The eggs are usually eleven in number; sometimes ten, and sometimes twelve; and as many as fifteen are said to have been found in one nest; Montagu says even eighteen. They are smooth and of a very pale green colour, and of an obtuse shape.

The old birds are supposed to remain in pairs throughout the year, but the male leaves the female as soon as she begins to sit. The hen frequently covers the eggs with down or other substances if she leaves the nest for a time.

The young Ducks, or Flappers, are unable to fly until eight or ten weeks old. They choose their partners before leaving for the north the following year.

Male; weight, about two pounds and a half—from thirty-six to forty ounces. One was shot in March, 1855, on the Bassenthwaite lake, near Bowness, in Cumberland, which weighed three pounds and three quarters. Length, two feet two inches. The specimen just mentioned, measured two feet three inches in length. Bill, yellowish green; iris, dark brown. Head, crown, and neck on the upper part, rich dark metallic glossy green—this is succeeded by a narrow ring of white —the neck on the back lower down, and the nape, greyish chesnut brown; the remainder of the lower part of the neck, rich dark chesnut; in winter each feather has an edging of white; breast above, deep chesnut, with a vinous or deep purple tint; below greyish white, with a tinge of dull yellowish, and on the sides elegantly marked with delicate grey lines; back above, greyish chesnut brown, becoming darker on the lower parts, the feathers edged with the former colour; below, velvet black, with a reflection of blue or green.

The wings extend to the width of nearly three feet, and have the second quill feather the longest. Greater wing coverts, with a bar of white near the end, the tips velvet black; lesser wing coverts, greyish brown, with a tinge of yellowish brown; primaries, dusky greyish brown; secondaries, greyish brown on the inner webs, the speculum, formed of the outer portion of the outer webs, rich shining purple, passing into, and margined by, a bar of velvet black, and tipped with white; tertiaries, pale chesnut brown, the outer webs darker than the inner. The tail, of twenty feathers, has the four middle ones deep velvet greenish black, and curled upwards and backwards, or to speak perhaps more correctly, forwards, the others greyish ash colour, the margins white, those of the outermost feathers the widest; upper tail coverts, bluish or greenish velvet black; under tail coverts, velvet black. Legs and toes, orange yellow; webs, orange yellow.

In some other species of birds, we find the female, in occasional exceptional instances, the consequence either of age or of some peculiar constitutional idiosyncrasy, assuming the plumage of the male, but it is a curious fact in the natural history of the Mallard, as also indeed in that of other Ducks, that every year, in every instance, he assumes the dress of the female, perhaps a shade darker. This change commences about the beginning of the last week in May, and is completed in a month, namely by the beginning of the last week in June. In the beginning of August he again begins to don his own attire, and by about the end of the first week in October is 'himself again.'

The female is less than the male. Length, one foot ten inches; bill, greenish grey, black on the inner part, and light yellowish brown towards the tip; the tooth black. Iris, brown; head on the sides and the crown, pale buff brown with streaks of blackish brown; neck, also pale buff brown and streaked with blackish brown, but the streaks smaller; the lower part of the neck of a richer tint; chin and throat, pale buff brown. Breast, pale dull yellowish brown, the centres of the feathers varied with a darker shade; on the sides pale yellowish brown with blackish brown spots; back, blackish brown, the feathers being deeply margined with reddish white and pale yellowish brown.

The wings have the first and second quill feathers nearly equal in length; greater wing coverts towards the end, white, the tips velvet black; lesser wing coverts, greyish brown, with the lower tier deeply tinted with pale reddish brown; primaries, dark brown; secondaries, dark brown on the inner webs, on the outer the speculum has the upper half green with purple reflections, the lower half velvet black with white tips to the feathers; tertiaries, also dark brown. Tail, brown, the feathers margined with white and reddish white; under tail coverts, pale brown, the centres of the feathers varied with a slightly darker shade. Legs and toes, orange; webs, darker orange.

In some instances the female has been known to assume the plumage of the male, even to the curled feathers of the tail.

The young have a tinge of yellow on the whole of the breast. The male resembles the female till after the first moult.

Sir William Jardine observes, 'The Wild Duck is sometimes subject to variety; we have seen the drakes having the upper parts of a bluish grey, the dark breast paler; and we possess a Duck shot from a flock, which has the wings and part of the head and neck white.'

A hybrid between the male Wigeon and the female Wild Duck, has been described as a separate species, under the name of the Bimaculated Duck, so called, apparently, from two patches of chesnut brown, margined and varied with white, on the side of the head and neck. It was supposed, subsequently for some time, to be a hybrid between the Mallard and the Teal, but Frederick Bond, Esq., in a letter to me on the subject, says, 'I have a fine specimen, of a hybrid between the Wigeon and the Wild Duck, which closely approaches the original specimen of the Bimaculated Duck, but being only a bird of the year, the markings on the head are not very well defined; but another specimen of the same brood, now alive, had the markings much better defined, and if it lives to moult again, I hope, and fully believe, that it will prove a complete Bimaculated Duck. The female of the brood is exactly like the specimen which formerly belonged to Mr. Vigors, and is now with the male in the British Museum.'

Mr. Vigors' specimen, just mentioned, was taken in a decoy at Boarstall, near Otmoor, Buckinghamshire, in the year 1771. The following is the description of it, compiled from Mr. Selby's account:—Male; bill, blackish grey, passing towards the base and edges into orange yellow; between the bill and the eye, and behind the ear coverts are two irregular patches of chesnut brown, margined and varied with white. Head on the sides, dark glossy green, on the front, crown, and back, very deep reddish brown, glossed with purple black, and passing on the back of the neck into deep violet purple; on the sides, the neck is dark glossy green, and on the rest of the upper part reddish brown, with oval black spots; breast, on the middle part, pale reddish brown, spotted with black; below, yellowish white, with waved black lines, most distinct on the sides.

Greater and lesser wing coverts, brown, the lower range having pale brown tips; the speculum is dark green, glossed with purple. The tail is wedge-shaped, with the two middle feathers black, narrow, and pointed, and much longer than the others, which are brown, margined with white; upper tail coverts, greenish black, glossed with purple; under tail coverts, also greenish black, with a purple gloss. Legs and toes, pale orange; webs, pale orange.

Temminck says that the males of this kind appear to vary very much in the degree of purity of the tints of their plumage, and in the colour and form of the two large spots on the neck. One specimen was covered in part only with the variegated plumage of the Mallard, while all the rest was like that of the female, but dotted here and there with some feathers of the male. The top of the head alone exhibited some red colour at the tips of the feathers, the metallic green also being clouded with black at the end of the white feathers.

# GARGANEY.

GARGANEY TEAL. SUMMER TEAL. GARGANEY DUCK.

| | |
|---|---|
| *Anas querquedula,* | PENNANT. MONTAGU. |
| *Querquedula circia,* | SELBY. |

*Anas*—A Duck. *Querquedula*—............

THE present, in this country, as a rather rare and at the same time very neatly marked species, is always desirable as an acquisition to a collection.

In Europe it is plentiful in Holland and Germany, and is seen in Sweden, Russia, Kamtschatka, France, Spain, and Italy. In Asia likewise, in Siberia, the Dukkun in India, Persia, Arabia, China, and in the neighbourhood of the Caucasus; also in Africa, in Tunis.

In Yorkshire the Garganey has more or less frequently occurred near Doncaster, York, Barnsley, Halifax, and other places. Mr. Dunn, of Hull, obtained two in the year 1840. Several specimens have been shot in the vicinity of Swinhope, Lincolnshire, as the Rev. R. P. Alington has informed me. In Cornwall two were procured near Falmouth, one of them at Swanpool, in March, 1846. In Oxfordshire they occur sometimes, though rarely, in the neighbourhood of Weston-on-the-Green, and other parts. In August, 1830, three birds of this species, all young, alighted on some water near Otmoor, and were shot by a farmer. In Norfolk the Garganey is not uncommon in the neighbourhood of Yarmouth, and occasionally breeds about there; it also is known in different places in the county. It has occurred in Surrey, at Godalming. Likewise in Cambridgeshire. In Cornwall, Kent, Devon, and Essex, it is said to be rare.

In Scotland six specimens were obtained in Stirlingshire, during the last fortnight of March, 1861.

In Orkney a few appear in the spring.

In Ireland it is extremely rare, and the same observation is applicable to Wales.

The Garganey resorts to low watery lands, and only occasionally to the neighbourhood and estuaries of the sea-coast.

It is a migratory or moveable species, in the spring and autumn months, and is seen with us on these occasions; most so, it is said, in the former, for a brief space during such 'changing scene.' Those that occur are probably stray individuals, which have been driven out of their ordinary course. The vernal migration is made in March and April, and the autumnal in October and November. They travel by night, and in small parties.

The Garganey is considered a remarkably delicate bird for the table. It is not very shy in its nature, and soon becomes tame in confinement. Meyer says 'During the day the present species conceals itself on the water, among flags and weeds, that abound on the borders of lakes and ponds, ditches and rivers; it may also sometimes be met with feeding in a low meadow or field. Its time for roosting is the middle of the day, and it takes its rest either on the water, or standing and squatting among the long grass in meadows. Towards the dusk of evening, and mostly earlier than other Ducks, it starts from its retreat to the usual feeding ground, among which, pools, occasioned by heavy rain and thawed snow, form a favourite resort; there the Garganey Teal busies itself throughout the night, until the approach of daylight reminds it that its safety becomes endangered.

The Garganey Teal is not conspicuous for the bright colouring of its plumage, but, on near inspection, it will be found to be one of the most beautifully marked of its family, and its general appearance is graceful; its capabilities in the way of swimming and walking, are equal in every respect to those of the foregoing species. Its flight is exceedingly buoyant, sometimes very quick, and it is said to be capable of evolutions that are peculiar to itself. These are, that the bird rolls occasionally over and over in the air, showing to the beholder first its under, and then its upper parts. Its flight when on its migratory journey is performed in a straight progress, and when a small number or family are together on the wing, they form a sort of line, but the individuals

# GARGANEY.

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*Anas querquedula.* PENNANT. MONTAGU.
*Querquedula circia.* SELBY.

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When it is disturbed from its hiding-place, it very frequently settles again near the same spot, and during its stay in any place, it is known frequently to approach very near the habitation of man, where a suitable piece of water invites it.'

The food of this species consists of insects and their larvæ, slugs, seeds, worms, the small fry of fish and frogs, the roots and shoots of different water-plants, grasses, grain, barley, millet, and oats. The last-named are moistened with water before being swallowed. The smaller articles of food are obtained by sifting with the bill.

The usual note is described as a low hoarse croak.

The Garganey begins to lay, as Mr. Hoy has recorded in a communication to Mr. Hewitson, about the middle of April, or towards the end of the month or the beginning of May.

The nest, according to the same authority, is made of dry grass and rushes, mixed with the down of the bird itself. It is placed in low and marshy situations, among reeds and rushes, and by the borders of inland waters and rivers, among the adjoining rank herbage.

The eggs are from eight to ten, or even fourteen in number—buff in colour.

Incubation continues for about twenty-one days.

The young birds, as soon as hatched, follow their mother to the nearest water.

The colours in this species are of a subdued tone. Male; weight, fourteen or from nearly that to fifteen ounces; length, one foot four inches, or from that to one foot four and a half or five inches. Bill, bluish brown grey, behind its base and over the eye is a broad streak of white, which passes down the sides of the neck. Iris, dark brownish lead-colour; forehead, light purple reddish brown, shaded on the crown, back of the head, and neck behind, into a rather darker shade, ending in a point half way down the latter. The sides of the head and of the neck, purple brown, variegated with short fine lines of white. Chin, black; throat and breast above, yellowish brown, with rather broad crescent-shaped marks of pale blackish brown; below dull yellowish white, with a few dusky streaks; the sides distinctly marked with numerous transverse undulating black lines. Behind the legs is a tranverse riband, striped with grey, black, white, and leaden blue. Back, rather dark brownish black, glossed with green, with an edging to each feather of a lighter shade of yellowish brown, the edging becoming paler and more irregular on the lower part.

The wings have the first quill feather the longest; greater wing coverts, dull bluish grey, tipped with white; lesser wing coverts, bluish grey, edged with white; primaries, brownish black; the wing spot on the outer webs of the secondaries is dull but glossy green, with a margin of white below; tertiaries, bluish grey. The scapular feathers are very elegant, being long and of a lanceolate shape; the colour deep black, shaded into grey at their lower edge, and with a narrow distinct line of white running along the shaft. The tail, of fourteen feathers, is dusky greyish brown; under tail coverts, mottled with brownish black and yellowish white. Legs and toes, bluish grey brown; webs, bluish grey brown.

The female is less than the male; over the eye is an indistinct streak of pale brown; head on the crown, and all over, brown, with spots and lines of a darker shade; neck on the back, brown, the feathers edged with white; chin and throat, white. Breast, greyish white, variegated with two shades of brown; below white; the sides pale brown, varied with a darker shade; back, dark brown, with reddish brown edges, and white tips to the feathers. Greater and lesser wing coverts, dark greyish brown. The speculum very dull and indistinct, and bordered on each side with white; tertiaries, dark brown, the feathers tipped with white, and with reddish brown edges to the feathers.

The young male resembles the female till after the first moult.

# TEAL.

## COMMON TEAL.

| | |
|---|---|
| *Anas crecca,* | Pennant. Montagu. |
| *Querquedula crecca,* | Selby. Gould. |
| " *secunda,* | Aldrovandus. |
| " *minor,* | Brisson. |

*Anas*—A Duck. *Crecca*—..........?

The Teal is widely dispersed over the European continent, being plentiful in Germany, Denmark, Holland, France, Spain, Turkey, and Italy, Iceland, Kamtschatka, Norway, Sweden, and Russia. In Asia it occurs in Asia Minor, China, India, Japan, Arabia, and Persia; and in Africa in Egypt and the northern districts; also, so writes Selby, in North America.

They are plentiful in most parts of the country, at least in the winter half of the year, when the numbers of the resident birds are added to by large arrivals from the north. Either very dry, or very hard weather, causes them at each season to leave their accustomed haunts.

In Cornwall the Teal is not uncommon near Falmouth, as at Penryn Creek, Gwyllyn Vase, Swanpool, and other places. A young Teal was shot by Mr. Girdlestone, at Hickling, in Norfolk, in the month of July; some birds of this species generally remain to breed in that county—at Reedham, Ranworth Broad, and Scoulton Mere. In Kent, in Romney Marsh; and in Cumberland, in the mosses about Carlisle, according to Dr. Heysham. They have done so in Yorkshire, on Strensall Common, near York; so too in Northumberland; and the Rev. Gilbert White, of Selborne, mentions young Teal taken on the verge of a pond in Wolmer Forest; likewise in Wales.

In Orkney, though a resident throughout the year, it is by no means numerous, but is most plentiful during winter: some stay to build in the summer. In Ireland also, it is a common and indigenous species; the same remark applies to Scotland.

The situations it frequents are the edges of rivers, lakes, pools, ponds, and streams, watery meadows, wet stubble-fields, and ditches, especially where flags and rushes afford both a natural screen from observation, and a supply of food; cultivated and uncultivated districts, provided that these requirements are supplied, are equally sought.

It is a migratory species, appearing by the middle or end of September, and remaining till the middle of March. They travel, for the most part, in large flocks, and chiefly by night, though large numbers are also seen moving in the daytime; in either case at a high elevation.

These birds are fonder of lochs and inland waters than of the sea-side. They are not very shy, and I have seen them on a pond adjoining a public highroad, namely, at Burton-Agnes, near Burlington. They have a habit, like the Jack Snipe, when put up, of flying round and round in circles, returning to the same place, after a short flight, unless when disturbed in the morning, in which case they rise up high in the air, and fly off. During the day they repose on the water, or near to its brink, with the head drawn back between the shoulders, or hidden under the feathers. They leave for their feeding-places immediately after sunset. These birds are excellent eating. They do well in confinement, and have bred in the gardens of the Zoological Society. The males assemble in small parties, in the latter part of the season, before the females and the young make their appearance.

They fly very lightly and well, and, when in flocks, both in single line and the form of a triangle. They run very nimbly and cleverly among reeds and other long herbage.

They make their food of barley, oats, and grain generally; duck-weed and other plants, grass, seeds, and water-insects. The search for these occupy their 'Night Thoughts,' for, as before observed, they rest during the day. The first-named they moisten before swallowing.

The nest, which is usually built by the margin of an inland lake, but sometimes near the sea-shore, and in clefts of rocks and stony places, is placed among, and constructed of heath, grass, or other vegetable substances, in moorland and marshy districts, in rushy or boggy places. There is a thick lining of down and feathers: the whole is of rather large size.

The eggs are from eight, ten, or eleven, to fifteen in number. They have been found under a furze bush without any nest. They are white, with a tinge of buff or cream-colour.

Male; weight, about eleven ounces or a little over, on to twelve ounces; length one foot two inches and a half, to one foot three inches. The bill is dark lead-colour—nearly black, the tip black. The feathers about the base of the under mandible are thickly speckled with dull green. These green spots extend round the bill, getting darker underneath, and widening out at the chin, where they form a spot of considerable size, nearly black. Round the edge of this black spot a very narrow band of light buff extends along the chesnut on the head, over the eye, and loses itself in the chesnut at the back of the neck. Another stripe of buff branches off from the former in front of the eye, and extends under it, where it becomes nearly white, and ends at the ear coverts. Iris, pale hazel brown; the eyelid white, forming a spot below the lower line and the eye; between these two light bands round the eye, and extending a short way down the neck, rich light blue, glossed with deep green, gradually narrowing until it joins the chesnut at the back of the neck, at which point is a pitch of black, slightly burnished with purple; underneath the lower pale line, extending to the chin and a short way down the neck, rich chesnut. Head on the forehead, crown, and sides, and a short way down the back and sides of the neck, very rich chesnut brown; these feathers are slightly elongated, almost concealing the black patch. Chin, black; throat and neck in front, chesnut; breast on the upper part, yellowish white, spotted with black, and with a tinge of purple; below dull dusky white; on the sides barred or waved with narrow zigzag black and white lines; back on the upper part, pale grey, minutely zigzaged with darker waved lines; on the lower part the dark brown colour is so thick as to appear nearly black.

The wings expand to the width of two feet eleven inches; the first and second quills are nearly equal; greater wing coverts, greyish brown, deeply tipped with white, forming a bar; those next to the body are tipped with yellowish rufous; underneath the quills are light blackish or grey; the shafts white; lesser wing coverts, greyish brown; primaries, dull blackish brown. Of the secondaries the first six are of a fine velvet black, the next of a resplendent glossy green, and both tipped with white; the speculum, or spangle, has the first feathers black, tipped with white, and a small rich speck of burnished green at the base; this spot continues to increase in the other feathers till the entire half of each becomes rich green with a reflection of blue; the last feather considerably pointed. The long tertiaries have some of the feathers half grey, and one feather near the beauty spot has one side dull grey, the other rich bright grey near the quill, then black, and finally edged with white. Greater and lesser under wing coverts, white. The tail is of fourteen feathers, slightly pointed, pale dusky brown, edged with white; the two middle feathers slightly extended and grey, edged with a narrow line of buff; underneath the tail is ash grey. Upper tail coverts, almost black, edged with rufous buff, some half black; under tail coverts, broadly edged with white, the centre feathers jet velvet black; outside these a pale but rich clear spot of cream-colour, bounded on the upper side with black. Legs and toes, brownish leaden grey, the joints darker; webs, brownish leaden grey.

The male assumes the plumage of the female in the summer, by the end of July or beginning of August, and this he retains till the general moult.

The female has the upper bill yellow on the edges, olive green on the sides, and olive brown on the ridge; the under bill yellowish; the tooth black. A brown streak extending to the nape is the substitute for the green patch behind the eye. Head on the crown, light yellowish brown, spotted with dark dusky brown; on the sides yellowish white, spotted with dusky brown; neck on the front and sides, freckled with half-moon shaped marks of two shades of brown; on the back pale dull yellowish, streaked with deep brown. Chin, pale brown; throat, yellowish white, spotted with brown; breast on the upper part, glossy yellowish white; on the lower part and sides, dull white, with dark brown spots. Back on the upper part, dark brown, with two narrow bars of yellowish buff brown and whitish on each feather. The speculum has less green and more of the purple tinge, and at the same time more black; under tail coverts, dull white, spotted with dark brown. Legs and toes with a tinge of yellow.

The young of the year, after the two first months are like the female, but somewhat darker in plumage; the males do not assume their distinctive dress till about the middle of December.

When first hatched they are covered with dark-coloured down.

The plate is taken from a design by the Rev. R. P. Alington.

# WIGEON.

## COMMON WIGEON. WHEW DUCK.

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|---|---|
| *Anas Penelope*, | PENNANT. MONTAGU. |
| *Mareca Penelope*, | STEPHENS. SELBY. |

*Anas*—A Duck. *Penelope*—The name of the wife of Ulysses. Why applied to this bird, I cannot tell.

THIS handsome Duck is widely distributed in Europe and Asia—it ranges from Iceland to Norway, Sweden, Lapland, Finland, Holland, where some breed, as also in Russia, Prussia, Germany, and Poland. It occurs likewise in Africa, finding its way to Egypt. In Asia, it has been procured in Asia Minor, and in India in Japan.

It frequents both the sea-coast and the grassy borders of rivers, swamps, lochs, lakes, fens, and ponds. It is a very abundant species, and great numbers are taken in decoys.

In Yorkshire the Wigeon is met with more or less commonly about Doncaster, York, Leeds, Sheffield, Hebden Bridge, Barnsley, and other parts of the county. In Northamptonshire it occurs, as elsewhere; in Norfolk it is abundant. In Cornwall it is not uncommon in the neighbourhood of Falmouth—at Swanpool, Gwyllyn Vase, Penryn Creek, and Mylor Creek. In Lincolnshire on Croxby Lake.

In Orkney this species is numerous in winter. In Ireland also it is common.

Mr. Selby and Sir William Jardine have found the nest in Sutherlandshire, on Loch Laighal, Loch Hope, Loch Shin, and Loch Naver, and also on smaller waters near Lairg.

With such exceptions as those mentioned above, the Wigeon goes northwards in the spring to breed, returning again in the autumn; the former in March and April, and the early month of May, the latter in the middle or end of September.

The young of the year, after the two first months are like the female, but somewhat darker in plumage; the males do not assume their distinctive dress till about the middle of December.

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The plate is taken from a design by the Rev. H. H. [illegible]

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COMMON WIGEON. WHEW DUCK.

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With such exceptions as those mentioned above, the Wigeon goes northwards in the spring to breed, returning again in the autumn; the former in March and April, and the 'merry month of May,' the latter in the middle or end of September, and early in October, or later with the weather. Meyer says, speaking of their migrations, 'These journeys are generally performed during the night, at which time the birds fly at no great elevation, and may easily be known by their continued whistling; when the journeys are continued during the day, the birds fly very high, and in the usual manner of Ducks —following one another; but these birds fly so very close upon the heels of their leader, that it forms a distinguishing peculiarity.' 'The young keep among the rushes and reeds in the lakes; the old birds betaking themselves to the shallows on the coast.'

In its natural habits the Wigeon is far from shy, and is easily tamed. It is, however, in this country, in its wild state, obliged to learn to provide for its security by suitable precaution. Lord Stanley had a male Wigeon which paired with a female Pintail that had previously bred in confinement. Eggs were laid two successive seasons, but the first year they were destroyed, and the second she forsook them. In the 'Gardener's Chronicle' of April, 1842, it is stated, 'A few years since a pair of Wigeons were kept in the river which bounds the Botanic Gardens at Bury St. Edmonds. The male bird was shot during the winter, and the following spring was succeeded by a wild one, no doubt attracted by the call of the female, by whom it had several young ones, which all left at the usual period of migration except the pinioned parent. Last year a male bird again made its appearance, and another brood was the consequence; a small portion of their wings have been taken off, and they are now become as tame as any of the water-fowl.' The Wigeon is much esteemed for the table. It is a sprightly and gay bird, and is a great ornament to a piece of water.

This species feeds principally on water-insects and their larvæ, small mollusca, worms, the fry of fish, and frogs; as also the buds, shoots, leaves, and seeds of plants, and grass; and these it browses on in the daytime, but it chiefly seeks its food in the mornings and evenings, and also at times in the night.

The note is a whistling or whewing cry.

These birds visit northern countries for the most part to breed—Norway, Sweden, and others. They begin to pair by about 'St. Valentine's day.'

They build among rushes, grass, flags, fern, and reeds, or low bushes where there are such, and use the former materials and leaves in the construction of the nest, the lining being supplied with down from the bird's own body. The situation chosen is the neighbourhood of some lake or river, and the nest itself is cleverly concealed.

The eggs are from five to eight, or, Meyer says, ten or twelve in number. They are of a fine cream-white colour.

When the hen bird begins to sit, the male retires into seclusion. The incubation of the eggs continues for twenty-four or twenty-five days. The young, as soon almost as hatched, betake themselves to the water.

Both the male and female Wigeon have been known to pair with the Pintail, and with the Common Duck.

Male: weight, about twenty-three or twenty-four ounces; length, nearly one foot eight inches. The bill is narrow, and of a bluish lead-colour, the tip and the tooth black; iris, dark dusky brown—from it a green streak passes backwards. The head is high, and narrow in shape. From the forehead extends over the crown a band of fine yellowish orange cream-colour, forming a sort of crest; the remainder of the head and neck rich chesnut, speckled with black—it is divided from the breast by a band or collar of beautiful narrow waved lines of brown and white; nape, beautifully barred with black and pale reddish white; chin and throat, almost black. The breast, on the upper part and sides, is pale vinous red, lightest in front, and darkest on the sides; below, the breast is white, and rayed with grey on the sides, paler lower down. Back, variegated with greyish white and black in fine irregular undulating lines.

The wings have the first and second quill feathers of nearly equal length. They expand to the width of two feet three or four inches. The ridge of the wing is dusky grey brown; greater wing coverts, white, tipped with black, forming an upper border to the beauty spot; of the lesser wing coverts the upper ones are grey, finely powdered with white; the others white. Primaries, dusky brown; of the secondaries those next the body have the margin of the outer webs more or less white. The speculum is glossy green, with a broad edge of black above and below. Tertiaries, velvet black on the outer webs, with white edges, the inner ones deep greyish brown: they are very long. The tail is wedge-shaped, the two middle feathers being pointed, and considerably longer than the others; these are dusky black, with a tinge of hoary grey; the others, which are also pointed, grey edged with rufous brown. There are fourteen feathers in all. Upper tail coverts, black, edged with rufous, and freckled with grey; under tail coverts, black, glossed with green, and edged with white. Legs and toes, dusky bluish, or greenish grey—the hind toe has a rudimental web; claws and webs, dusky bluish grey, the middle of the web darker.

The mottled plumage of summer, which is begun to be assumed by the male bird as soon as the female begins to lay. and is retained till the end of November or the beginning of December, is as follows:—Head, crown, and neck, spotted all over with black; breast, reddish brown, with darker bars and lines; back, mottled and varied with large bars of reddish brown and dusky, and finer waved lines of black and white. Under tail coverts, white, with reddish brown bars.

Female; length, one foot five or six inches. The bill is less blue than in the male, and darker bluish grey. Head, crown, and neck, speckled with dark dusky brown and pale ferruginous, each feather being minutely barred. Breast above, vinous brown, below white, or nearly white, and the sides yellowish brown, which is often more or less extended over the remainder of the under parts. Back on the upper part, dusky greyish brown, with narrow bars of ferruginous brown, the centres of the feathers being darker than the margins. Lesser wing coverts, brown, margined with white. The speculum is black, tipped with white. The tertiaries are partially margined with white and partly with rufous, the latter next the body. The tail is of fourteen feathers; under tail coverts, white, spotted with blackish brown. Legs and toes, deep bluish grey.

The young male of the first year resembles the female.

# AMERICAN WIGEON.

*Anas Americana*, WILSON. AUDUBON.
*Mareca Americana*, STEPHENS.

ANAS—A Duck. AMERICANA—American.

THIS Duck is abundant in various parts of North America, from the River Saskatchewan and the Columbia, and the shores of Hudson's Bay, through the United States to Florida, Carolina, Mexico, Cuba, Martinique, and St. Domingo.

A pair of these birds were on sale in the London market in the winter of 1837-8, as recorded in the 'Naturalist' magazine, volume iii. page 417.

In the autumn they depart in flocks from their summer quarters.

They are described as being of a lively and frolicsome disposition, and are considered excellent eating.

They are said sometimes to perch on trees.

Their food is composed of flies, worms, insects, small fry, beech-nuts, and grain of various kinds; and they do much damage in the rice plantations. They come out to feed in the evenings.

The note is a soft whistle, enunciated by the word 'whew,' and it is frequently imitated successfully by those [illegible].

The eggs are from six to eight in number.

Male; length, one foot eleven inches. Bill, bluish grey, bordered and tipped with black; iris, hazel—behind the eye a broad dark green streak passes backwards. Forehead and crown, dull white, on the sides and back pale brownish white, freckled with black; the feathers at the back of the head a little elongated; a white band runs from the forehead to the nape. Neck in front, reddish brown. Breast above, white, on the sides brownish red, glossed with grey; on the sides it is barred with dark lines; below white. Back of the upper part, reddish

# AMERICAN WIGEON.

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| *Mareca Americana,* | STEPHENS. |

*Anas*—A Duck. *Americanus*—American.

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The eggs are from six to eight in number.

Male; length, one foot eleven inches; bill, bluish grey, bordered and tipped with black; iris, hazel—behind the eye a broad dark green streak passes backwards. Forehead and crown, dull white, on the sides and back pale brownish white, freckled with black; the feathers at the back of the head a little elongated: a white band runs from the forehead to the nape. Neck in front, reddish brown. Breast above, white, on the sides brownish red, glossed with grey; on the sides it is barred with dark lines, below white. Back on the upper part, reddish brown, glossed with grey, each feather marked across with small zigzag blackish lines; on the lower part the back is brown, waved in like manner with brown and white.

The wings have the second feather the longest, but the first nearly as long; greater wing coverts, white, slightly marked with brown and tipped with black; lesser wing coverts, brown; primaries, brown. The secondaries have the speculum on the outer webs green, edged with black above and below. The tertiaries are blackish brown, with a tinge of green on the outer webs and brown on the inner, bordered with white. Tail, brown—it is slightly pointed, the middle feathers being elongated; upper tail coverts, brown, barred with paler brown and white; under tail coverts, brownish black, with a tinge of green. Legs and toes, dark brown; webs, dark brown.

The female is in length about one foot nine inches. Head, crown, and neck, yellowish white, thickly speckled with black. The breast with very little rufous. Back, dark brown, edged and faintly barred with pale brown and white.

The young male at first resembles the female, and does not acquire his full distinctive plumage till the second year. Wilson says these birds are subject to a regular change every spring and autumn. It appears that the 'Act of Uniformity' is infringed by most, if not all, of the males of the Duck tribe.

# EIDER DUCK.

EIDER. COMMON EIDER. ST. CUTHBERT'S DUCK. COLK.
GREAT BLACK AND WHITE DUCK.

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| *Anas mollissima*, | LINNÆUS. |
| *Somateria mollissima*, | FLEMING. SELBY. |
| *Anser lanuginosus*, | [illegible] |

*Anas*—A Duck. *Mollissima*—Softest.

THE native haunts of the Eider are the Arctic regions of the north—Greenland, [illegible], and [illegible]; they are numerous on the coast of Labrador, in North America, and all about Baffin's Bay and Davis' Straits. Their southernmost range appears to be as far as Maine and New York, in the United States.

In Europe they are plentiful about the shores of Norway, Sweden, Lapland, Denmark, and Schleswig-Holstein, Iceland, Spitzbergen, the Ferroe Isles, Nova Zembla, and other parts within the Frigid Zone; a few occur in Holland and France. In Asia the species ranges to the same latitudes.

Many breed off the Northumbrian coast, on the Farn Islands, and Coquet Island, but they are far less numerous than they used to be, having been much molested during the breeding-season.

A few have occurred by the shore, and even inland, in other parts of the country. An Eider Duck was killed in Berkshire, at Sunning, during a very severe frost. In Durham it has occurred near Bishop Auckland and [illegible]. In Norfolk a few young birds have been met with in the [illegible].

In Scotland, Robert Gray, Esq. has informed me of one which occurred on the Tyne sands, Dunbar, in [illegible]. In Orkney they are common, and many remain throughout the year, and breed in various parts of the islands. The same brown, glossed with grey, each feather marked across with small, narrow, blackish lines; on the lower part the back is brown, waved in like manner with brown and white.

The wings have the second feather the longest, but the first nearly as long; greater wing coverts, white, slightly marked with brown and tipped with black; lesser wing coverts, brown; primaries, brown. The secondaries have the speculum on the outer webs green, edged with black above and below. The tertiaries are blackish brown, with a tinge of green on the outer webs and brown on the inner, bordered with white. Tail, brown; it is slightly pointed, the middle feathers being elongated; under tail coverts, brown, barred with paler brown and white; upper tail coverts, brownish black, with a tinge of green. Legs and feet, dark brown; webs, dark brown.

The female is in length about one foot nine inches. Head, crown, and neck, yellowish white, thickly speckled with black. The breast has a very little rufous. Back, dark brown, edged and faintly barred with pale brown and white.

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| *Somateria mollissima,* | FLEMING. SELBY. |
| *Anser lanuginosus,* | BRISSON. |

*Anas*—A Duck. *Mollissima*—Most soft.

THE native haunts of the Eider are the frozen regions o the north—Greenland abounds with them, and they are numerous on the coast of Labrador, in North America, and all about Baffin's Bay and Davis' Straits. Their southernmost range appears to be as far as Mayne and New York, in the United States.

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In Scotland, Robert Gray, Esq. has informed me of one which occurred on the Tyne sands, Dunbar, in 1851. In Orkney they are common, and many remain throughout the year, and breed in various parts of the islands. The same remark applies to the Hebrides and the Shetland Islands.

In Ireland it is known, but is rare.

The Eider is entirely a bird of the ocean, and of its estuaries—fresh water being uncongenial to it. Meyer writes as follows:—'Small islands that slope gradually into the sea, the Eider Duck chooses by preference; there they may be seen to sun themselves on the sands in fine weather in the morning. The time of roosting is the middle of the day, which is most frequently enjoyed on the liquid element. During the night this bird is chiefly employed in feeding, and its movements from place to place are performed morning and evening.'

These birds can hardly be said to migrate, but rather to wander, and at such times, as also when the females are accompanied by their young, they are most difficult to be approached, even with a boat or vessel of any kind.

If undisturbed they seem to be very fearless. Mr. Hewitson mentions that among some of the islands in Norway, where they are preserved, they would even suffer the old man who had the care of them to stroke them on the back. Others, in Iceland, allowed Sir William Hooker to touch them while they were sitting, without appearing to be at all alarmed. They go together in large and small flocks in the winter, and generally keep in deep water, diving for their food. The Greenlanders esteem them for the table; but 'what is one man's food is another man's poison,' and I should be inclined to suppose that there are many other dishes which would be preferred by an Englishman's appetite. The young have been successfully reared in confinement at Knowsley, Lord Derby's, and others brought up by Mr. Selby from the egg lived for a year; like instances have also been recorded.

They dive with ease, and can remain under water for a long time. If suddenly surprised they endeavour by this mode to escape pursuit; but if approached in a boat at 'long range,' generally take wing. They fly strongly and well, at a rate, it has been computed, of more than ninety miles an hour. Their walk on the land is unsteady, and as if performed laboriously.

They feed on mussels and other shell-fish, small crabs and other crustacea, and the fry of fishes.

'In some countries,' as mentioned by Meyer, 'this bird is properly protected by the laws, which punish those who molest them with a fine of some eight or ten dollars; but where the breeding-places are respected, the number of nests increases annually to a wonderful degree, and in consequence the coasts become literally covered with the nests of these birds. On the Island of Wildoe, near Iceland, where only a single family resides, the place is entirely peopled by tame birds of this species during the breeding-season. The ground chosen for the nest is an undulating sea-coast or island, the same being scantily covered by low herbage, low birch trees, juniper or lichens, and at intervals interspersed with sand and shingle.'

The Eiders pair in March, and the males have frequent contests with each other.

'About April,' writes Selby, 'they are seen assembling in small groups along the shores of the mainland, from whence they cross over to the islands in May; soon after which the females begin to prepare their nests, and they usually commence laying about the 20th. of that month. The males, as soon as this takes place, and incubation commences, leave the females, and again spread themselves along the shore in companies of four or five together, and do not, as far as my observation goes, 'continue on watch near the shore as long as the females remain sitting,' and then desert her and the newly-hatched brood, as mentioned in Shaw's Zoology.'

'In the localities,' says Meyer, 'where the Eider Duck breeds, it is so careless, or rather so little awed by the presence of mankind, that it makes its nest not only near but among human habitations, and the female allows persons not only to take her eggs from her, but even to touch her without shewing any timidity; the male bird is at the same time warily approached within gunshot, either on the water or land.'

The down with which the nests of these birds are lined, is made an article of commerce, and in the countries where they are plentiful, the people rob the nest two or three times in the season. The eggs are also taken at the same time, so as to make the birds lay again, 'but it is generally found that if they are robbed more than twice, they begin to desert the place, and if pillaged oftener they quit it entirely.'

'A few days after the young Ducks leave the eggs,' says Bishop Stanley, they proceed to the water under the guidance of their dam, who swims with them on her back to some distance, when, making a sudden dive, she abandons them to themselves, and re-appearing, tempts them to come towards her; so that on the first trial they commonly become expert swimmers. When the breeding-season is over, they generally stand out to sea; yet numbers are seen frequenting the bays and creeks about the coast. The eggs furnish food to the inhabitants, and the down is bought on the spot at about thirteen or fourteen shillings a pound, by merchants, who send it to different parts of the world. It is used chiefly for making bed-coverings, on account of its exceeding lightness as well as warmth; a large bed-quilt sometimes weighing only five pounds three ounces, of which the linen covering weighs two pounds and a half, leaving two pounds eleven ounces for the Eider-down.'

Rennie writes as follows in his edition of Montagu's 'Ornithological Dictionary;'—'Brunnich, who wrote an express treatise on the Eider Duck, informs us that their first object after pairing is to procure a suitable place for their nest, preferring the shelter of a juniper bush, where it can be had; and where there is no juniper, they content themselves with tufts of sea-grass, bundles of sea-weed cast up by the tide, the crevices of rocks, or any hollow place which they can find. Some of the Iceland proprietors of breeding-grounds, in order to accommodate them, cut out holes in rows on the smooth sloping banks where they would not otherwise build, but gladly take possession of them when scooped out to hand. It is not a little remarkable that, like several other sea-birds, they almost always select small islands, their nests being seldom, if ever, found on the shores of the mainland, or even of a large island. The Icelanders are so well aware of this, that they have expended a great deal of labour in actually forming islands, by separating from the main island certain promontories joined to it by narrow isthmuses.

The reason of the preference of islands seems to be security from the intrusion of dogs, cattle, and other land animals, to whose vicinity they have so great an aversion, that the Icelanders are careful to remove these, as well as cats, to a distance from their settlements. 'One year,' says Hooker, 'a fox got over upon the ice to the Island of Vidoe, and caused great alarm; he was, however, though with difficulty, taken, by bringing another fox to the island, and fastening it by a string near the haunt of the former, by which means he was allured within shot of the hunter.'

The Arctic Fox is traditionally said to have been introduced into Iceland by one of the Norwegian Kings, to punish the disaffection of the inhabitants.

Both the male and female Eider Ducks work in concert in building their nest, laying a rather coarse foundation of drift grass, dry tangle, and sea-weed, which is collected in some quantity. Upon this rough mattress the female spreads a bed of the finest down, plucked from her own breast, and by no means sparingly; but, as Brunnich informs us, heaping it up, so as to form a thick roll quite round the nest. When she is necessitated to go in quest of food after beginning to sit, she carefully turns this roll of down over the eggs to keep them warm till her return. Marten says she mixes the down with moss; but as this is not recorded by another observer, I think it is not a little doubtful, particularly as in the localities chosen for nestling she would find it no easy matter to procure moss. It is worthy of remark, that though the Eider Duck lays only five or six eggs, it is not uncommon to find more than even ten and upwards in the same nest, occupied by two females, who live together in perfect concord.

The quantity of down in each nest is said by Von Troil to be about half a pound, which by cleaning is reduced to a half; by Pennant, who examined the Eiders' nests in the Fern Islands, off Northumberland, it is only estimated, when cleaned, at three quarters of an ounce, and this was so elastic as to fill the crown of the largest hat. The difference of quality in these two accounts, theoretically ascribed by the translator of Buffon to difference of climate, may have arisen from the one being the first, and the other the second or third nest of the mother Duck; for if the first nest be plundered of the down, though she immediately builds a second, she cannot furnish it with the same quantity as before; and if forced to build a third time, having then stript her breast of all she could spare, the male is said to furnish what is wanting, which is known as being considerably whiter than the female's. When the nest is not robbed, it is said that he furnishes none.

The extraordinary elasticity of the down appears from what I have already said of three quarters of an ounce filling a large hat; and Pontoppidan says that two or three pounds of it, though pressed into a ball which may be held in the hand, upon being allowed to expand will fill the foot covering of a large bed. It is worthy of notice, however, that it is only the down taken from the nests which has this great elasticity; for what is taken from the dead birds is much inferior, being, as Pontoppidan says, far from as light as what the female plucks to form a bed for its young. It is on this account that it is prohibited by the laws of Norway to kill the Eiders for their down.'

The Eider Duck begins to pair in March, and to lay about the beginning of the last week in May, that is to say, in this country. Incubation lasts from three weeks to a month. The male bird at this period leaves his mate, and repairs to the open sea. The young, as soon as hatched, are led by the dam to the water, and in some instances, it appears certain that they must be carried by her in her bill. They gradually venture out farther and farther till able entirely to provide for themselves. Von Troil says that the female at first takes them on her back a little way, and then dives, and leaves them to 'sink or swim.'

In England the Eiders build so far south as the Fern Islands and Coquet Island. In one of the former the remains of an old lighthouse appears to be a favourite resort, and within the ruined and deserted walls several have been accustomed to lay. They seem to prefer islands for the purpose, but also make use of hollows in rocks on the mainland, and sand-banks along the sea-shore. Great numbers are frequently placed close together, so that it is hardly possible to walk along them without treading on some.

With reference to what has been already stated, it seems that the nest has at first only grass, lichens, or sea-weed for its composition, but when all or nearly all the eggs are laid, down, plucked by the female from herself, is daily added, the quantity being then successively increased. If the bird leaves her charge for a time, the eggs are carefully covered over and concealed, either with down, or grass and leaves, according as each has been supplied.

The eggs, of a light green colour, are usually five in number, but not very unfrequently as many as eight or even ten are found together, two birds having laid in the same place. Both, it appears in that case, sit together in an amicable manner.

Male; weight, six or seven pounds or over; length, two feet to two feet one or two inches; bill, dull yellow, passing towards the tip into dull green; the tooth yellowish white; iris, dark brown. Forehead and head on the crown, velvet black, with a reflection of purple, as far as the back of the head, continuing in a line on each side; the remainder of the head is white, with the exception on the sides of two light green marks. The feathers which compose this are of a fine and silky texture, and capable of being raised so as to form a sort of ruff. Neck in front, above white, below pale buff; below the nape the feathers are pale green. Chin and throat, white; breast above, white, with a tinge of brownish yellow, below black, with the exception of one white patch above and behind the legs. Back, white.

The wings expand to the width of about three feet; greater and lesser wing coverts, white; primaries, dull black; secondaries, dull black; tertiaries, white and elongated, drooping downwards, the tips black. Tail, dusky greyish black; upper tail coverts, black. Legs and toes, dull greenish yellow; webs, dusky black.

The female is of a pale brown colour, with a reddish tinge, and mottled with marks of darker brown. Weight, between five and six pounds; bill, deep greenish grey. Head, crown, neck on the back, and nape, light reddish brown, streaked with dusky. Chin, throat, and breast above, reddish brown, barred with blackish, the latter is dark brown below with dull transverse black bars. Back, reddish brown, barred with black and grey.

The wings are crossed with two faint white bars; greater and lesser wing coverts, black, edged with brown; primaries, dull black. Tail, dull black; legs and toes, deep greenish grey.

The young male at first resembles the female. In changing their garb the first winter, Yarrell describes them as having the bill greenish grey; head and neck mottled with two shades of dark brown, with a few white feathers appearing in different parts; the lower portion of the neck and the upper part of the back mottled black and white, the wing coverts and tertiaries becoming white, the rest of the plumage black; the legs greenish grey.

Montagu says that these birds do not arrive at maturity, and assume the pure white colour, till the third or perhaps the fourth year. Mr. Selby also assigns the latter period.

In the first year the back is white, and the parts that are usually so, except part of the crown and sides of the head, and the lower part of the neck and breast, black.

In the second year the crown of the head is black, and the neck and breast spotted with black and white.

In the third year they have a piebald appearance, the consequence of the assumption of white on the back and scapulars.

By the fourth year the adult garb is acquired.

Other varieties have also been observed.

# STELLER'S WESTERN DUCK.

WESTERN POCHARD. WESTERN DUCK.

| | |
|---|---|
| *Anas dispar,* | TEMMINCK. |
| *Fuligula dispar,* | SELBY. JENYNS. |
| *Polysticta Stelleri,* | EYTON |

*Anas*—A Duck. *Dispar*—Different.

THIS Duck, first described by Steller, is a native of the north of Europe, Asia, and America. A few have been killed in Sweden and Denmark, as also in Germany. In the second-mentioned continent it is found in Siberia and Kamtschatka, and others of the boreal regions.

In Yorkshire one of these birds was shot at Filey, August 15th., 1845. In Norfolk, one, a male, at Caisted, near Yarmouth, on the 10th. of February, 1830.

The places they inhabit are rocky coasts and the mouths of rivers, belonging, as they do, to the class of those kindred species which 'in aquis degunt.'

They are said to assemble in flocks, and the male and female to keep permanently together.

They fly with much ease and rapidity, and also swim and dive well.

Their food is made up of the small fry of fish, sea-insects and their larvæ.

This species breeds, it is said, on high and steep rocks.

This is a bird of striking and handsome appearance. Male; length, one foot seven inches; bill, brownish black, the tip yellow; upon the forehead and between the upper mandible and the eye is a pale green spot. From the base of the lower mandible a blackish brown streak goes down to or nearly to a broad collar of the same colour, which encircles the neck and joins that of the back. Iris, pale brown; round the eye is a narrow circle of black, inclining also forwards and backwards, forming a spot on the back of the head. Head on the sides, crown, and the neck on the upper part, white, forming a collar which is only infringed on by the blackish brown of the chin. There is another pale green spot at the back of the head. The nape below the white is black, and this colour also comes round the neck. Chin and throat, rich blackish brown; breast above, white, on the middle and lower part rich chestnut brown, darker on the latter, passing into buff in front and on the sides just below the point of the wing. Back, all along the middle part, black; there is a black patch formed by the tips of the otherwise white feathers.

Just above the joint of the wing is a black spot with green reflections; lesser wing coverts, white; primaries, dusky blackish brown; secondaries, partly white, the outer web metallic blue, forming the speculum—the end portion white. The tertiaries are long and pointed, white on the inner webs, rich blue on the outer, and curved downwards, as are the long scapulars, which are also marked like the four upper tertiaries, namely, the narrow inner webs white, and the broader outer ones rich bluish metallic blue, and the shaft almost white. Tail, dusky blackish brown, and rather more pointed than in others of this genus; upper tail coverts, black, with a tint of blue; under tail coverts, dark brownish black. Legs and toes, olive green—the hind toe has a deep lobe; webs, olive green.

The female has the bill olive black, the tooth yellow horn-colour; greater wing coverts, dusky olive brown, tipped with white; lesser wing coverts, dusky olive brown; primaries, dusky; the secondaries also tipped with white, thus forming two bars across the wing, between which is the speculum of rich [illegible] colour. Of the tertiaries the three longest are dusky. Tail, dusky. Legs and toes, pale bluish; claws, black; webs, blackish.

# STELLER'S WESTERN DUCK.

WESTERN POCHARD. WESTERN DUCK.

| | |
|---|---|
| *Anas dispar.* | PENNANT. |
| *Polysticta dispar.* | SELBY. JARDINE. |
| *Fuligula Stelleri.* | EYTON. |

*Anas*—A Duck. *Dispar*—Different.

THIS Duck, first described by Steller, is a native of the north of Europe, Asia, and America. A few have been killed in Sweden and Denmark, as also in Germany. In the second-mentioned continent it is found in Siberia and Kamtschatka, and others of the boreal regions.

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They are said to associate in flocks, and the male and female to keep permanently together.

They fly with much ease and rapidity, and also swim and dive well.

Their food is made up of the small fry of fish, and insects and their larvæ.

This species breeds, it is said, on high and steep rocks.

This is a bird of striking and handsome appearance. Male; length, one foot seven inches; bill, brownish black, the tip yellow; upon the forehead and between the upper mandible and the eye is a pale green spot. From the base of the lower mandible a blackish brown streak goes down to or nearly to a broad collar of the same colour, which encircles the neck and joins that of the back. Iris, pale brown; round the eye is a narrow circle of black, inclining also forwards and backwards, forming a spot on the back of the head. Head on the sides, crown, and the neck on the upper part, white, forming a collar which is only infringed on by the blackish brown of the chin. There is another pale green spot at the back of the head. The nape below the white is black, and this colour also comes round the neck. Chin and throat, rich blackish brown; breast above, white, on the middle and lower part rich chesnut brown, darker on the latter, passing into buff in front and on the sides just below the point of the wing. Back, all along the middle part, black; there is a black patch formed by the tips of the otherwise white feathers.

Just above the joint of the wing is a black spot with green reflections; lesser wing coverts, white; primaries, dusky blackish brown; secondaries, partly white, the outer web metallic blue, forming the speculum—the end portion white. The tertiaries are long and pointed, white on the inner webs, rich blue on the outer, and curved downwards, as are the long scapulars, which are also marked like the four upper tertiaries, namely, the narrow inner webs white, and the broader outer ones rich blackish metallic blue, and the shaft streak white. Tail, dusky blackish brown, and rather more pointed than in others of this genus; upper tail coverts, black, with a tint of blue; under tail coverts, dark brownish black. Legs and toes, olive green—the hind toe has a deep lobe; webs, olive green.

The female has the bill olive black, the tooth yellow horn-colour; greater wing coverts, dusky olive brown, tipped with white; lesser wing coverts, dusky olive brown; primaries, dusky; the secondaries also tipped with white, thus forming two bars across the wing, between which is the speculum of rich chesnut colour. Of the tertiaries the three longest are dusky. Tail, dusky. Legs and toes, pale bluish; claws, black; webs, blackish.

# KING DUCK.

## KING EIDER.

*Anas spectabilis*, PENNANT. MONTAGU.
*Somateria spectabilis*, FLEMING. SELBY.

*Anas*—A Duck. *Spectabilis*—Showy—handsome.

THE King Duck is in Europe abundant in the extreme north—at Spitzbergen and Nova Zembla. It is not uncommon on the coast of Norway, as also in Sweden and Denmark in severe winter weather.

In North America it is also plentiful about Hudson's Bay, Labrador, and in other parts, and advances southward in winter as far as New York; also in Greenland. It occurs in Asia, namely, in Siberia and Kamtschatka.

With us it is of but rare occurrence. One specimen was procured the first week in January, 1855, at Lowestoft, in Norfolk; another, a female, had been shot on Breydon, near Yarmouth, July 25th., 1813. In Suffolk, one was killed at Aldborough.

In Ireland it is mentioned as extremely rare, but has occurred. One of these birds was shot in 1850, by Arthur Dymoke Bradshaw, Esq., as he has informed me, I believe on the Lough of Belfast.

In Orkney it is a rare occasional visitant, and has been known formerly to breed on Papa Westray.

This species frequents the open ocean, and also its bays, inlets, and the mouths of rivers.

In the winter they do not go far south, but assemble, according to the report of Captain James C. Ross, R.N., in large flocks, the males by themselves, and the females with the young, and often in the open sea, far distant from any land—'a life on the ocean wave.' The down is almost as much esteemed as that of the Eider Duck by the Greenlanders, by whom also the bird is considered as an excellent one to eat. "The King Eider is usually sociable, and even neighbourly, towards its congener, except during the breeding-season, when the male bird is too irritable and quarrelsome to be endured in company with the peaceful Eider; when one of this species mingles among the encampment of the Eider Ducks, the persons interested in their welfare are obliged to destroy it."

They feed on crustacea and marine insects.

The nest of the King Duck, placed on rocks near the sea, is lined with the down of the female, and composed externally of sea-weeds or sticks, with grass or mosses.

The eggs are of a pale green colour. They appear to be from four to six in number. The male bird leaves the care of them to the hen, and repairs to the sea.

In some parts of America, Wilson says that the nests are so crowded together, that a person can scarcely walk without treading on them.

Male; length, two feet and half an inch; bill, deep red, the knob at the base, which is flat on the top and compressed on the sides, but divided into two, the elevated parts [illegible] black, encircled with deep black, which colour is continued through the eye, and surrounds a green triangular-shaped mark, which proceeds from the base of the bill to below the eye; the tooth is dull yellowish red; at the base of the upper bill the feathers are light green, passing backwards on each side of the neck and taking in half the eye, beneath which and round to the chin the collar is dull white; iris, yellow. Head on the crown and behind, pale bluish ash-coloured, the sides green; neck on the upper part, white, on the lower [illegible] yellow; nape, white; chin, white, with a small black streak slanting back and downwards; throat, white. Breast, above, pale dull yellowish, below black—there is a round white spot on the sides behind the legs. Back on the upper part, in the middle, white, the remainder black.

Greater wing coverts, black, with a white spot on the middle, the shafts deep ferruginous; on each side of the [illegible] is a patch of white; lesser wing coverts, white; primaries, dusky black, tinged with red on the inner webs; secondaries, dusky black—they curve downwards over the primaries; tertiaries, dusky black, with a green reflection, [illegible] the long scapulars, fall in a drooping manner [illegible]

land—'a life on the ocean wave.' The down is almost as much esteemed as that of the Eider Duck by the Greenlanders, by whom also the bird is considered as an excellent one to eat. 'The King Eider is usually sociable, and even neighbourly, towards its congener, except during the breeding-season, when the male bird is too irritable and quarrelsome to be endured in company with the peaceful Eider: when one of this species mingles among the encampment of the Eider Ducks, the persons interested in their welfare are obliged to destroy it.'

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The nest of the King Duck, placed on rocks near the sea, is lined with the down of the female, and composed externally of sea-weeds or sticks, with grass or mosses.

The eggs are of a pale green colour. They appear to be from four to six in number. The male bird leaves the care of them to the hen, and repairs to the sea.

In some parts of America, Wilson says that the nests are so crowded together, that a person can scarcely walk without treading on them.

Male; length, two feet and half an inch; bill, deep red, the knob at the base, which is flat on the top and compressed on the sides, but divided into two, the elevated parts velvet black, encircled with deep black, which colour is continued through the eye, and surrounds a green triangular-shaped mark, which proceeds from the base of the bill to below the eye; the tooth is dull yellowish red; at the base of the upper bill the feathers are light green, passing backwards on each side of the neck and taking in half the eye, beneath which and round to the chin the collar is dull white; iris, yellow. Head on the crown and behind, pale bluish ash-colour, on the sides green; neck on the upper part, white, on the lower dull yellow; nape, white; chin, white, with a small black streak slanting back and downwards; throat, white. Breast above, pale dull yellowish, below black—there is a round white spot on the sides behind the legs. Back on the upper part of the middle, white, the remainder black.

Greater wing coverts, black, with a white patch on the middle, the shafts deep ferruginous, on each side of the outer ones a patch of white; lesser wing coverts, white; primaries, dusky black, tinged with red on the inner webs; secondaries, dusky black—they curve downwards over the quills. Tertiaries, dusky black, with a green reflection; their ends, as also the long scapulars, fall in a drooping manner over that part of the wings; greater under wing coverts, black; lesser under wing coverts, black. Tail, dusky black—it is of a wedge shape, and short; upper tail coverts, black; under tail coverts, black. Legs and toes, dull yellowish red; webs, darker yellowish red.

The female is less in size. Bill, greenish brown; the protuberance at its base is not so large, nor so bright in colour as in the male, and is nearly upright instead of horizontal. The whole of the plumage is brown of two shades. Head, crown, and neck, rather light brown of two shades.

The young male at first resembles the female. Later on, the head and neck are described as dusky yellowish grey, crowded with black spots; the feathers on all the upper parts dull black, with yellowish brown edges; the breast yellowish brown, spotted and barred with black. The full plumage is said not to be acquired till the fourth year.

According to Captain Sabine the young birds do not acquire the development on the bill till the fourth year.

In some specimens there is a little white on the hind part of the head, and on the back.

# VELVET SCOTER.

## VELVET DUCK.

*Anas fusca*, [illegible]
*Oidemia fusca*. [illegible]

*Anas*—A Duck. *Fusca*—A dark [illegible].

The native regions of this Duck are the northern parts of Europe, Asia, and America. It is numerous in [illegible] Norway, and occurs also in Iceland, the Faroe Islands, [illegible] Sweden, Denmark, Holstein, Holland, Pomerania, [illegible] France, Italy, and Switzerland. Thus again in [illegible] Kamtschatka; as likewise in Labrador, Hudson's Bay and the countries about it, stretching sometimes as far [illegible] Georgia.

They breed in central Norway on the lakes and pools in the vicinity of the sea, on the islands and between the rocks of the bays of Bothnia and Finland; and are particularly plentiful on the Lake Ladoga. The male and female remain in pairs long before the breeding-season, and are apparently inseparable.

In Yorkshire, one was shot at Bentley, near Doncaster, by the gamekeeper of Sir W. B. Cooke, Bart., another on the coast in the winter of 1851, as Mr. William Felkin, Junior, of Carrington, near Nottingham, has informed me. It is obtained occasionally on the moors near [illegible], so I hear also, but seldom, near Burlington. In Oxfordshire, specimens have been seen near Oxford in severe winters. In Berkshire, one near Wargrave, in January, [illegible]. In Cornwall, the species has occurred near Falmouth, on the [illegible], and the Carrack road. One, a female, at [illegible], December [illegible] part of the wings, greater under wing coverts. Under [illegible] under wing coverts, black. Tail, dusky black—it is [illegible] wedge shape, and short; upper tail coverts, black; under tail coverts, black. Legs and toes, dull yellowish red; webs darker yellowish red.

The female is less in size. Bill, greenish brown; the protuberance on the base is not so large, nor so bright in colour as in the male, and is nearly straight instead of [illegible]. The head of the female is [illegible] of two shades. [illegible] of two shades.

[illegible]

[illegible]

[illegible]

# VELVET SCOTER.

### VELVET DUCK.

| | |
|---|---|
| *Anas fusca,* | PENNANT. MONTAGU. |
| *Oidemia fusca,* | FLEMING. SELBY. |

| | |
|---|---|
| *Anas*—A Duck. | *Fusca*—A dark colour—brown. |

THE native regions of this Duck are the northern parts of Europe, Asia, and America. It is numerous in Russia and Norway, and occurs also in Iceland, the Faroe Islands, Lapland, Sweden, Denmark, Holstein, Holland, Pomerania, Germany, France, Italy, and Switzerland. Thus again in Siberia and Kamtschatka; as likewise in Labrador, Hudson's Bay and the countries about it, stretching sometimes as far south as Georgia.

They breed in 'central Norway on the lakes and ponds in the vicinity of the sea; on the islands and between the rocks of the bays of Bothnia and Finland; and are particularly plentiful on the Lake Ladoga. The male and female appear in pairs long before the breeding-season, and are apparently inseparable.'

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1850. In Suffolk, a male bird was procured at Aldborough, in January, 1848, and a female on the River Orwell a few days afterwards. One also off Felixstowe, as T. J. Wilkinson, Esq. has written we word. In Westmoreland, one, a male, was shot on Windermere, on the 23rd. of May, 1848; a female was observed about the same time. In Norfolk, they are occasionally shot in hard winters, on the coast, but not exclusively so; several were procured in the very severe one of 1829-30. Devonshire is also given as a locality, if indeed that may be called such where the bird is not localized, and is only of chance and sparse occurrence.

In Scotland it is not uncommon in the Frith of Forth. They are common in Orkney, especially about Damsay Sound; also in the Hebrides. In Shetland they are more rare.

They have occurred likewise in Ireland—near Dublin.

These birds keep about the mouths of large rivers and other waters in the neighbourhood of the coast, retiring in winter to the open sea, the 'Great Highway' not only for those 'who go down to the sea in ships, and occupy their business in great waters,' but for all those creatures of the hand of the Lord who 'take their pastime therein,' both 'feathered fowls' and 'things creeping innumerable.'

These Ducks arrive in September, October, and November, later or earlier according to the season, and begin to depart northwards in March. Their migration is made during the night-time.

They assemble in winter in small flocks of from three to six, or larger ones of from ten or twelve to twenty, and are for the most part not shy; single birds are at times seen. The mother shews much anxiety about her young, if approached.

They dive with great readiness even from the first, and are pre-eminent in the exercise of the art, if that indeed can be called an art, proficiency in which is innate, and not acquired. All animals that can swim, do so naturally, and without instruction, man being the only exception to the rule. On the land they are awkward in their movements, and walk but badly. Their flight is somewhat heavy if made only for a short distance, but when more extended is performed with greater speed.

Their food consists of mussels and other shell-fish, crustacea, worms, the fry of fish, and the buds and roots of different water-plants.

Its note is a short squeak, by no means, says Audubon, unpleasant to the ear.

They hatch, it is said, very late—seldom before the middle of July.

Audubon writes of this species, that they 'begin to form their nests from the 1st. to the 10th. of June. The nests are placed within a few feet of the borders of small lakes, a mile or two distant from the sea, and usually under the low boughs of the bushes, of the twigs of which, with mosses and various plants matted together, they are formed. They are large and almost flat, several inches thick, with some feathers of the female, but no down.' They are also found on hummocks, or in long grass among willow swamps.

The eggs are usually six, but sometimes eight or ten in number, of a uniform pale cream-colour, tinged with green. The males leave the females after incubation has commenced.

A pair had bred on the same water for six or seven years in succession. The young did not quit the pond until they were able to fly; as soon as that is the case the mother bird escorts them to the sea.

Male; weight, about three pounds two ounces; length, one foot ten or eleven inches. The bill, which is broad, is yellowish orange margined with black, the base of the upper mandible raised into a knob, also black on the upper part; the tip of the nail darker orange than the remainder. Iris, pale yellowish white; behind, and rather lower than the eye, is an angular space of pure white; the eyelids are also white, the eye small. The head, which is large, on the crown, and the neck, nape, chin, and throat, dull black; breast, black; back, intense velvet black.

The wings, which have the first quill the longest, are crossed by a white bar; with this exception, the whole of the remainder of the plumage the same, namely, the greater wing coverts, which are tipped with white, are otherwise, as the lesser wing coverts, primaries, secondaries, with the exception of the white tips, tertiaries, greater and lesser under wing coverts, tail, of fourteen feathers and short, and the tail coverts—also intense velvet black. Legs, scarlet red on the inner part, and red with a tinge of orange on the outer. the joints are stained with black; toes, orange red, claws, black webs, dark brownish black.

The female is not so large as the male. Bill, dusky, the knob at its base is much less than in the male; between it and the eye, and behind the eye, are greyish white spots. Forehead and the sides of the head below the eye, dull brownish; crown, neck, and nape, dark brownish, the tips of the feathers lighter; throat, white marked with dusky specks; breast, ash-coloured brown, streaked and spotted with dusky brown; back, dusky brownish black, the tips of the feathers paler. Primaries, deep brown; the secondaries are tipped with white. Tail, hoary brown. Legs and toes, yellowish red.

The young male has from the first the white spot over the eye; there is also a small white patch under the chin. The whole of the remainder of the plumage, or to speak more strictly, the down, is of a black colour. There is a general resemblance to the female, and the feet, according to Audubon, first begin to shew their brilliant colour.

# COMMON SCOTER.

BLACK SCOTER. SCOTER.

ANAS NIGRA, PENNANT. MONTAGU.
" " BEWICK.
OIDEMIA NIGRA, FLEMING. SELBY.

OIDEMA—A SWELLING. NIGRA—BLACK.

In Europe the Scoter ranges in its geographical distribution from Denmark, Lapland, Finland, and Russia, to Holland, France, and Italy.

In America from the northern parts to the United States. It occurs also in Asia, in Siberia, and Kamtschatka.

It breeds in Iceland, but not in any great numbers.

It is found along the shores, especially of rocky coasts, and though compelled to leave these for a time, while engaged with its nest and eggs, it even then keeps to the vicinity of such, in the choice which it makes of a temporary home in some adjacent lake, pond, or tarn.

This bird has been obtained in Yorkshire, near Doncaster in severe winters, also in the neighbourhood of York, Selby, and Burlington, and on the moors about Huddersfield. In July, [illegible], a very large flock appeared on the waters of Bretton Park, near Barnsley, and great numbers of them were procured. A specimen was shot on a small stream near the town of Louth, Lincolnshire, and at least a dozen miles from the sea, in the year 1850, by the Rev. William Marsden, as the Rev. R. P. Alington has told me. In Cornwall it has been observed on the River Tamar and [illegible], and one was found dead on the beach at [illegible]. In Hampshire they have been seen near Christchurch, and about the Isle of Wight.

# COMMON SCOTER.

### BLACK SCOTER. WHILK.

| | |
|---|---|
| *Anas nigra,* | PENNANT. MONTAGU. |
| " *cinerascens,* | BECHSTEIN. |
| *Oidemia nigra,* | FLEMING. SELBY. |

*Anas*—A Duck. *Nigra*—Black.

IN Europe the Scoter ranges in its geographical distribution from Denmark, Lapland, Finland, and Russia, to Holland, France, and Italy.

In America, from the northern parts to the United States. It occurs also in Asia, in Siberia, and Kamtschatka.

It breeds in Iceland, but not in any great numbers.

It is found along the shores, especially of rocky coasts, and though compelled to leave these for a time, while engaged with its nest and eggs, it even then keeps to the vicinity of such, in the choice which it makes of a temporary home in some adjacent lake, pond, or bog.

This bird has been obtained in Yorkshire, near Doncaster, in severe winters, also in the neighbourhood of York, Selby, and Burlington, and on the moors about Huddersfield. In July, 1834, a very large flock appeared on the waters in Bretton Park, near Barnsley, and great numbers of them were procured. A specimen was shot on a small stream quite in the town of Louth, Lincolnshire, and at least a dozen miles from the sea, in the year 1850, by the Rev. William Marsden, as the Rev. R. P. Alington has told me. In Cornwall it has been obtained on the River Truro, and Carrack road, and one was found dead on the beach at Flushing. In Hampshire they have been seen near Christchurch, and about the Isle of Wight.

In Oxfordshire these birds are very frequently seen in the winter; flocks have also occurred in Cambridgeshire. In Suffolk a specimen occurred at Beccles, in February, 1848; and another was met with on the coast. They frequent Windermere, Westmoreland, every year. Fourteen were seen, and two of them shot the first week in July, 1848. In Norfolk they are common in some winters about Yarmouth, and occasionally occur inland. The young bird has been noticed by the Messrs. Paget, and others, in June and July. In Surrey one was shot on the canal at Farnham, on the 2nd. of November, 1844. In Wiltshire, one on the ornamental water at Stourhead, the seat of Sir Richard Colt Hoare, Bart., a distance of twenty miles from the sea.

In Orkney the Scoter is not very common as a winter visitant. One was shot in Sanday, in the winter of 1848-9, by W. Strang, Esq.

In Ireland it occasionally occurs. So also in South Wales, from whence Colonel Montagu received some specimens.

Meyer says, 'The adult males leave the breeding places about the end of July; the young birds migrate in August, and the greater numbers of intermediate ages and the females follow soon after; thus the larger flights arrive in September and October. By the latter end of March, and the beginning of April, the northern migration takes place.' On these occasions they fly in a slanting line.

They assemble at times in immense flocks, and cover the surface of the sea to a great extent. Considerable numbers are taken now and then in the nets of fishermen. They are difficult to be approached.

This species dives in an admirable manner, and is able to keep under water for a more than ordinary length of time. It resorts to this mode of escape, if pursued, in preference to taking wing.

'Its flight is tolerably quick, sometimes very high in the air, and always accompanied with considerable noise, produced by the beatings of its wings. On alighting it skims the surface for some distance.' It may more frequently be seen flying at a low elevation above the surface of the water, and straight forward, from one spot to another. It walks in a clumsy manner, and in a rather upright position, so as to preserve the 'balance of power.'

The food of these birds consists of crustacea, mollusca, mussels and other smaller shell-fish, and sea insects.

The note of this Duck is rough and grating. That of the male has been likened to the monosyllables 'tu, tu, tu,' and that of the female to 'ra, ra, ra.'

The nest of this Duck is described as being placed by the side of water in the most unfrequented situations, often far inland among brushwood or on stony ground; and made of grasses, twigs, and the dry leaves and the stalks of plants under the shelter of a willow or birch, or in a tuft of herbage, the down of the bird itself being made use of for lining.

After the female has laid, the male birds collect together in flocks, and repair to the coast.

The eggs are from five or six, to seven or eight, or nine, in number;—Thieneman says as many as ten, of a pale buff colour, tinged with green.

Male; weight, about two pounds nine ounces; length, one foot six inches, or over; bill, black, and grooved along the edges, where it is broad and flat. There is a knob of the same colour at the base of the upper mandible, and a space along the ridge of orange yellow. The rim round the eye is of the same colour. Iris, dusky brown. Head, black, with a tinge of glossy purple blue; crown, neck, nape, chin, throat, breast, and back, black.

The wings, which are short, have the second quill feather the longest. The first is strongly notched at about half its length. Greater and lesser wing coverts, primaries, secondaries, tertiaries, greater and lesser under wing coverts, tail, of sixteen sharp-pointed feathers and wedge-shaped, the middle ones being the longest, all, as also the tail coverts, black. Legs and toes, dusky reddish black; webs, nearly quite black.

The female has the bill dusky black; the knob scarcely raised. Head on the sides, paler than the rest; crown, neck, and nape, blackish brown, the edges of the feathers being of a lighter hue; chin and throat, greyish white. Breast, paler brown than the upper parts, and the feathers of a silky texture; back, black brown, the feathers edged with a paler shade. The greater and lesser wing coverts have also the edges a little lighter; under tail coverts, dark brown. Legs and toes, brown, with a tinge of green; webs, almost black.

The young resemble the female at first. Towards the winter, the sides of the head, neck in front, and on the sides, and chin, dull greyish white. The breast mottled with brown and white. The orange on the bill shews itself by degrees.

## SURF SCOTER.

| | |
|---|---|
| *Anas perspicillata,* | TEMMINCK. |
| *Oidemia perspicillata,* | FLEMING. SELBY. |

*Anas*—A Duck. *Perspicillata*—..........?

THE Surf Scoter belongs to the cold north, but the Arctic winter is too severe even for it, and it makes its way southwards at that season, and comes down so far as Florida, by Labrador, the Gulf of St. Lawrence, Hudson's Bay, Baffin's Bay, Newfoundland, and the other intermediate districts of the American continent.

In Europe it occurs on the Norwegian and Swedish coasts; and one, a female, was found on the Rhine. Individuals have also occurred in Switzerland and France.

In Cornwall one was found near Pendennis Castle, Falmouth, in the winter of 1845.

In Scotland an individual was shot in Musselburgh Bay, in the spring of 1852. Others also on the Frith of Forth; and in 'The Naturalist,' old series, volume iii, page 420, mention is made of the occurrence of a specimen.

In Shetland one was seen in Rona's Voe, by Mr. Robert Dunn, in June, 1847. In Orkney Surf Scoters appear in small flocks in the sounds during winter.

In Ireland a specimen was obtained near Belfast.

The Surf Scoter in summer resorts to the mouths of rivers, and fresh-water lakes in the neighbourhood of the sea, but this only for the purpose of rearing its young, for at other times, as its name conveys, it is a bird of the sea, and delights to float among the heaviest breakers of the 'rolling deep,' over which it makes its way with buoyant ease.

These birds arrive in October, and remain till the end of March.

They associate both in small and large flocks, and are said to be shy in their habits, and not easily approached.

They feed on mussels and other small shell-fish, and also on the shoots of water-plants, grasses, and flags.

Their cry is described by Audubon as rough, uncouth, and guttural.

The nest of this species, placed on the coasts of inland seas and by the borders of lakes, is formed of dry and withered weeds, flags, and grasses, in the midst of a hummock, or tuft of grass. The down of the bird itself serves for the lining. The hollow of the interior is said by Audubon to be six inches across, by two and a half in depth.

The eggs are four, five, or six in number, and of an oval shape, their colour pale yellowish, or cream white.

The males are said to leave the females till the young are able to fly.

Male; length, one foot nine inches. Bill, orange yellow, with a knob at the base of the upper mandible of vermilion red, on each side of it a patch of black and of other parts, the pale yellowish or cream white; on the forehead is an angular white patch; crown, neck, and nape, glossy black, with the exception of another white patch on the last named, brought down from the back of the head. Chin, throat, breast, and back, glossy black.

The wings have the first and second quill feathers of nearly equal length, and the longest in the wing, but the first rather the longest. Greater and lesser wing coverts, primaries, secondaries, tertiaries, greater and lesser under wing coverts, tail, of fourteen feathers, and the tail coverts, glossy black. Legs and toes, yellowish or reddish orange; webs, brownish black.

The female is dusky brown; bill, yellowish grey, the protuberance at its base is small, and of a dusky colour. The patch on the forehead is pale brown, as is the other on the nape, the sides of the head paler brown than the remainder of the plumage. Crown, neck, and nape, sooty brown, the latter paler than the other parts. Chin, throat, and breast, also dull, light sooty brown. Back, greater and lesser wing coverts, primaries, secondaries, tertiaries, greater and lesser under wing coverts, tail, and tail coverts, dusky brown. Legs and toes, greyish brown.

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The eggs are four, five, or six in number, and of an oval shape; their colour pale yellowish or cream white.

The males are said to leave the females till the young are able to fly.

Male; length, one foot nine inches; bill, orange yellow, with a knob at the base of the upper mandible of vermilion red, on each side of it a patch of black and of silver grey; iris, pale yellowish or cream white; on the forehead is an angular white patch; crown, neck, and nape, glossy black, with the exception of another white patch on the last named, brought down from the back of the head. Chin, throat, breast, and back, glossy black.

The wings have the first and second quill feathers of nearly equal length, and the longest in the wing, but the first rather the longest. Greater and lesser wing coverts, primaries, secondaries, tertiaries, greater and lesser under wing coverts, tail, of fourteen feathers, and the tail coverts, glossy black. Legs and toes, yellowish or reddish orange; webs, brownish black.

The female is dusky brown; bill, yellowish grey, the prominence at its base is small, and of a dusky colour. The patch on the forehead is pale brown, as is the other on the nape; the sides of the head paler brown than the remainder of the plumage. Crown, neck, and nape, sooty brown, the latter paler than the other parts. Chin, throat, and breast, also rather light sooty brown. Back, greater and lesser wing coverts, primaries, secondaries, tertiaries, greater and lesser under wing coverts, tail, and tail coverts, sooty brown. Legs and toes, greyish brown.

# RED-CRESTED WHISTLING DUCK.

RED-CRESTED DUCK. RED-CRESTED POCHARD.

| | |
|---|---|
| *Anas rufina,* | TEMMINCK. |
| *Fuligula rufina,* | GOULD. SELBY. |
| *Mergoides rufina,* | EYTON. |

*Anas*—A Duck. *Rufina. Rufus*—Red.

THIS curious-looking bird is a native of the south-eastern parts of Europe, and the middle and eastern portions of Asia. In the former it is plentiful in Italy, especially in the south, Dalmatia, the south of France, Switzerland, Austria, Germany, Turkey, Greece, and Hungary, in which last it is said most frequently to breed, and in the latter occurs in Persia, Himalaya, and the Dukkun, in India, the south of Siberia, Tartary, and about the Caspian Sea. Specimens were also procured from the north of Africa by Sir Thomas Reade, and from Barbary, in the same region, by Shaw.

Its natural resorts are fresh-water lakes, rivers, ponds, pools, and bogs, whether with or without the accompaniment of the native forest, and to these it keeps, preferring the water to the land. It appears to be but rarely seen on the sea-coast, as not sharing with others of its tribe in a natural predilection for 'the Sea! the Sea! the open Sea!'

The first occurrence of this species in England was at Boston, in Lincolnshire, where a male was shot in the month of January, 1826; it was at the time in company with some Wigeons. Several more were procured the same winter; some of them in the London markets. Mr. E. Newman, in the 'Zoologist,' p. 4166, records the occurrence of another example at Boston, in Lincolnshire, in January, 1854. One was shot

Cornwall, at [illegible] near [illegible] in [illegible] Another of these birds was [illegible] on the 12th. of January, [illegible] the same county. In [illegible] In Kent, a flock of [illegible] estate of the Hon. [illegible] female, was procured. [illegible] Northampton, has informed [illegible] in that lordship, in January [illegible]

They appear, so to speak, [illegible] state. In their habits [illegible] and consort closely together [illegible]

They fly well, and [illegible]

Their food is said to be [illegible] frogs, the fry of fish, insects, [illegible] sought and found by [illegible]

Their note is described [illegible] name, which is not [illegible]

The nest [illegible]

The eggs are [illegible] a uniform olive brown colour.

The young are able to fly about the [illegible] the female is much [illegible] leaves the nursery as soon as the female [illegible]

Male; length, one foot [illegible] very rich vermilion red colour, [illegible] bright red. A crest of long [illegible] texture and dull yellow colour [illegible] the sides and back on the upper part [illegible] with a tinge of rose [illegible] dark brownish black. Breast, [illegible] feathers on the sides edged with [illegible] pale greyish or yellowish brown, [illegible] the upper part near the neck, [illegible] The white patches are tinted, [illegible] a most delicate and beautiful [illegible] cast with the other white parts of the plumage [illegible] is more faint.

The wings have a white patch at the [illegible] feather is the longest; greater and lesser [illegible] or yellowish brown; primaries, at the base [illegible] rose-colour, the remainder greyish brown; [illegible] the outer webs white, thus forming [illegible]

in Cornwall, at Swanpool, near Falmouth, in February, 1815. Another of these birds was shot at Horsea Mere, in Norfolk, on the 12th. of January, 1844; one also at Yarmouth, in the same county. In Essex, one was met with near Colchester. In Kent, a flock of eighteen appeared near Erith, on the estate of the Hon. W. T. T. Fiennes, and one of them, a female, was procured. Mr. W. Brooks Gates, of Derngate, Northampton, has informed me of the occurrence of a specimen in that lordship, in January, 1853.

They appear, so to speak, to be far from shy in their wild state. In their habits they are sociable among themselves, and consort closely together in flocks.

They fly well, and swim and dive with great dexterity.

Their food is said to be composed of water-plants, small frogs, the fry of fish, insects, and crustacea; the last-named sought and found by diving or dipping the head under water.

Their note is described as hoarse—in unison with their name, which is not euphoneous.

The nest of this bird may be termed a bed of rushes.

The eggs are stated to be six or seven in number, and of a uniform olive brown colour.

'The young are able to fly about the beginning of July; the female is much attached to her young, but the male leaves the nursery as soon as the female begins to sit.'

Male; length, one foot nine or ten inches; the bill is of a very rich vermilion red colour, the nail also red, but paler; iris, bright red. A crest of long elongated feathers of a silky texture and dull yellow colour surmounts the crown; head on the sides and neck on the upper part, rich chesnut brown with a tinge of rose red; nape and lower part of the neck, dark brownish black. Breast, rich dark blackish brown, the feathers on the sides edged with dusky brown and white; back, pale greyish or yellowish brown, with a spot on the sides, on the upper part near the neck, of white, tinged with rose red. The white patches are tinted, while the bird is living, with a most delicate and beautiful rose-colour. The same is the case with the other white parts of the plumage, but the tinge is more faint.

The wings have a white patch at the joint; the first quill feather is the longest; greater and lesser wing coverts, greyish or yellowish brown; primaries, at the base, white tinged with rose-colour, the remainder greyish brown; the secondaries have the outer webs white, thus forming the speculum, which is white with a roseate tinge, and edged with slate-colour; tertiaries, greyish or yellowish brown. The tail, pale greyish brown; upper tail coverts, dark brownish black with a reflection of green. Legs and toes, vermilion red; webs, dusky black.

In the female the bill is brownish red, and therefore not so bright-coloured as in the male; the crest is wanting in development. Head on the sides, dull brownish white; forehead and crown, dark brown; neck on the back and nape, brown; on the sides the neck is greyish or brownish white; throat, also dull brownish white; breast above, yellowish or reddish brown, some of the feathers edged with a paler shade; on the middle part greyish or brownish white; back, pale yellowish or rufous brown, some of the feathers edged with a lighter colour. The wings have the shoulder greyish white; primaries, dusky; the speculum on the secondaries is greyish white. Tail, yellowish brown. Legs and toes, reddish brown.

In the young male the bill is bright vermilion red, the tooth white; iris, bright vermilion red; head on the sides, light chesnut, the feathers elongated towards the future crest; neck, chesnut; neck behind lower down, and nape, dark brown; breast below, light brown; back above, light brown; over the shoulder of the wing is a white patch. The wings underneath are white, with a faint tinge of pink; greater and lesser wing coverts, greyish brown; the primaries are dusky at the tip and on the edges; the shafts and part of the remainder white; the speculum is white. Tail, grey brown; upper tail coverts, dark brown; under tail coverts, also dark brown. Legs and toes, orange; the webs black.

white with a roseate tinge, and edged with [illegible] tertiaries, greyish or yellowish brown. The tail, [illegible] brown; upper tail coverts, dark brownish black with a [illegible] tion of green. Legs and toes, vermilion red, [illegible] black.

In the female the bill is brownish red, and therefore [illegible] bright-coloured as in the male; the crest is wanting in development. Head to the nape, dull brownish white; forehead and crown, dark brown; neck at the back and nape, brown; on the sides the neck is greyish or brownish white; throat, also dull brownish white. [illegible] plumage generally an earthy brown, paler [illegible] with a [illegible] shade on the [illegible] edges. [illegible]

In [illegible] of the [illegible] with the [illegible] greyish brown [illegible] edges [illegible] speculum [illegible] dark brown; under tail coverts, [illegible] dark brown. Legs and toes, orange; the webs black.

# POCHARD.

RED-HEADED POCHARD. COMMON POCHARD. POCHARD DUCK.
DUN BIRD, (FEMALE.) RED-HEADED WIGEON.

| | |
|---|---|
| *Anas ferina,* | PENNANT. MONTAGU. |
| *Fuligula ferina,* | SELBY. JENYNS. |
| *Nyroca ferina,* | FLEMING. |

*Anas*—A Duck. *Ferina*—.... .. ..?

THE species of bird before us extends its geographical range over a great portion of the continents of Europe and North America, going as far south in the last-named as Louisiana and Carolina; and is very plentiful in the States of Illinois, Indiana, Ohio, and Kentucky. They breed in the Fur Countries in the extreme north. Many likewise in various parts of Germany, Russia, and Holland. Some also, apparently, in France. They are taken too in Italy, and are found in Denmark and Sweden. In Asia the species occurs, namely, in India. It is recorded to have been met with in Africa—in Egypt.

In England it is, or used to be, the most abundant, in Lincolnshire and Norfolk, but the drainage of the fens has made a great difference in its numbers. It is seen still on Croxby Lake, and elsewhere.

It haunts inland lakes, rivers, brooks, ponds, and ditches, whose banks afford a shelter of alders, willows, reeds, and rushes, and other trees and plants, and also frequents the sea-coast.

The Pochard breeds in considerable numbers at Hornsea Mere, in front of Wassand, the seat of the late Rev. Charles Constable, in Yorkshire. It is met with in many parts of the county, more or less commonly, as about Doncaster, York, Leeds, Sheffield, Hebden Bridge, Barnsley, and Burlington. It occurs more or less frequently in Northamptonshire, the Hon. T. L. Powys has informed me. In Cornwall Mr. Cocks quotes it as common in the market at Falmouth, January 19th., 1850. In Oxfordshire they are very frequently seen in the winter; so also in Cambridgeshire and Norfolk, and have been known to breed in the latter county, at Scoulton Mere. In Derbyshire they have occurred on the Trent; also in Durham. In Surrey fifty or more have been seen at Godalming.

In Orkney they abound on the Loch of Scaill, and various other sheets of water in divers parts. In 1831 one was shot in Sanday, so late as the 28th. of June. It seemed, however, to be a solitary bird, I quote, as in so many instances, from the 'Natural History of Orkney,' published by Dr. W. B. Baikie, and Mr. Robert Heddle.

In Ireland they are common.

In Scotland, Sir William Jardine has shot one or two in Dumfriesshire, and they are frequently on sale in the market at Edinburgh.

They frequent fresh-water lakes, marshes, and rivers, as also the mouths of the latter when they join the sea, and the coast.

The Pochard is a winter visitor to us, arriving in October and November. The northern migration is carried on, it is asserted, during the month of March.

During the day-time these Ducks keep to the sea, and towards night come in to the streams. They are to a considerable degree marine birds. They are in much estimation for the table, but when they have fed by the sea lose the flavour which they otherwise are considered to possess.

They swim, like other birds of their class, with great speed, and dive with much expertness, keeping for a long time beneath the surface. They seem to lie rather deep in the water. They fly with tolerable quickness, but with some exertion, the wings being moved with short and quickly-repeated strokes. They go in a body, and not in a straight or diverged line. On the dry land they make indifferent progress.

Their food consists of the stems, shoots, roots, seeds, blossoms, and leaves of various water-plants, obtained by diving and otherwise, as also of tadpoles and young frogs, lizards, the fry of fish, insects, crustacea, and mollusca.

Mr. Yarrell mentions that when these Ducks are not excited or alarmed, their note is a low whistle, but that at other times it is a rough croak.

Meyer says, 'about the end of April the Red-headed Pochards pair; there are no quarrels between the male birds, for the female is said to choose her own mate; and the pair remain inseparable, and do not quit the spot until the young brood are hatched and ready to follow them towards the larger lakes, etc., where they consider them out of danger.'

The nest of the Pochard is made among rushes or other coarse herbage, and is lined with feathers. Many nests are placed near each other, in suitable localities, such as osier beds or grassy places.

The eggs are from eight or ten to twelve or thirteen in number, and of a buff white colour.

The Pochard bred, in the year 1855, in the gardens of the Zoological Society, as Frederick Bond, Esq. has written me word.

Male; weight, one pound thirteen ounces; length, about one foot seven inches and a half; bill, greyish blue across, black at the tip and about the base; iris, reddish or yellowish orange. Head on the sides and crown, deep glossy chesnut brown; neck in front, shading into deep brownish black on the breast; nape, brownish black. Breast above, deep brownish black, and on the sides dark dusky grey, marked with waved darker lines; and below the same, but paler. Back on the upper part, brownish black; on the middle and lower part, fine greyish white, with black waved pencillings.

The wings expand to the width of nearly thirty inches; the first quill feather is the longest; greater wing coverts, bluish grey; lesser wing coverts, greyish white, but darker and pencilled across with black; primaries, dark dusky brown, ended with darker brown; secondaries, bluish grey, tinged with brown, and narrowly tipped with white; tertiaries, freckled over with fine pencillings of grey, on a white ground. Tail, dusky greyish; it consists of fourteen feathers; upper tail coverts, nearly black; under tail coverts, black. Legs and toes, greyish blue; webs, bluish black, and large in size.

The female has the bill black; iris, brown; head on the crown, and neck on the back, sides, and nape, dusky greyish brown, with some ferruginous. The lower part of the neck in front is dark brown, with a tint of dark red. Chin and throat, pale greyish white, with an admixture of reddish brown. Breast above, dark reddish brown, the edges of the feathers mottled with reddish white. There are some brown spots on the sides; below the breast is greyish white clouded with brown. Back on the upper part, reddish brown; under tail coverts, dark grey.

In the young male the black on the breast does not appear till the second year. Previously the plumage resembles that of the adult female.

Mr. Selby describes a variety shot on the Northumberland coast, in which the head and neck were bright reddish orange, passing into reddish white upon the crown; the breast very pale brown, with a silky lustre; all the rest of the body greyish white, with numerous very fine zigzag lines of a darker shade; the quills and tail pale greyish white. Legs and toes, ash grey, with the webs darker.

Sir William Jardine mentions another variety which was of a pale tint of cream-colour, yet having all the colours marked in their particular places.

A variety of Duck, a male, of a kind supposed at the time, by W. R. Fisher, Esq., and Mr. Yarrell, to be a hybrid between the Pochard and the Ferruginous Duck, and described as such by the former accordingly in the 'Zoologist,' volume iii, pages 437-8, and afterwards, as hereafter mentioned, as a new species, under the title of 'Fuligula ferinoides,' or Paget's Pochard, but since considered, by Frederick Bond, Esq., to be intermediate between the Pochard and the Scaup, was obtained on Rollesby Broad, near Yarmouth, on the 27th. of February, 1849. The following is the description of it:—

Iris, yellowish white; head, crown, and neck, rich chesnut; the feathers on the lower part of the breast changing from yellowish brown to freckled. Back, freckled. The wings longer than those of the Pochard; the feathers of the axillary plume freckled at the end; greater and lesser wing coverts, freckled.

Subsequently a second specimen, similar to the before-mentioned one, was purchased by Mr. Bartlett, in the market, London, and this was described by Mr. Yarrell, under the name of the American Scaup, 'Fuligula mariloides,' of Vigors, who considered that there might prove to be two American species; the one the British Scaup, though a smaller bird there than here, and the other a larger species, also known and alluded to by Dr. Richardson, Swainson, and Sir William Jardine, in a note to his edition of Wilson. I believe, however, that American birds of our kinds are uniformly larger than with us, and I should therefore rather look for a second species in the smaller sort spoken of.

A third specimen was also obtained in Leadenhall market, by Mr. Henry Doubleday. This was at first imagined to be of the same species as Mr. Yarrell's American Scaup, but was then considered, by Mr. W. R. Fisher, as a new one, and was figured and described by him under the name of Paget's Pochard, 'Fuligula ferinoides,' in the 'Zoologist.' The following is the description, as given by Mr. Fisher:—

'The specimen of this bird which I have mentioned to be in the possession of Mr. H. Doubleday, and which is represented in the foreground of the cut at the head of this paper, is supposed to be in the adult dress, and has the bill black at the point and at the base, the remaining portion being pale blue; the irides yellowish white; the head and upper part of the neck of a rich and very deep chesnut, finely glossed with purple; the lower part of the neck and breast, black; in the younger birds the neck almost wants the purple gloss, and is of a lighter colour, the breast being also at first not much darker than the neck; the back and wing coverts are minutely freckled with greyish white on a black ground; the sides and flanks, both under and below the wings, are in the immature bird like the back, but in the adult lighter, the freckling being produced, as in the back of the Common Pochard, by lines of black on a white ground; the back and wing coverts are also darker in the immature than in the adult bird, and are tinged with yellowish brown; wing coverts, very dark brown, slightly powdered with greyish white; the primaries, light brown, broadly edged with dark brown, except the first, which has the whole of the outer and great part of the inner web dark brown; all the visible part of the secondaries, white, slightly powdered with grey, and forming a white bar across the wing; about a quarter of an inch near the ends of these feathers is black, and the tips are white in the immature bird, but in the adult the white is hardly visible; at both ages the uppermost feathers of the speculum are of a more uniform grey than the lower, and more or less edged with black; the rump and upper tail coverts, black, this colour being spread over a much greater extent in the adult than in the immature bird; on the chin is a small triangular spot of yellowish white; the lower part of the breast and belly, in the immature specimen, yellowish brown mixed with light grey, and slightly freckled with black; the yellow colour giving place to the grey, and the part becoming darker as the bird attains maturity; the feathers about the vent are in the immature birds white at the sides, and freckled with dark grey in the centre, the youngest bird also exhibiting in this part a good deal of yellowish brown; in the adult entirely of dark grey; the legs and toes, dark bluish grey; the webs and claws, black. The total length of Mr. Bartlett's bird was seventeen inches and a half.

This species may be distinguished from 'Fuligula ferina' externally, by its smaller size; the much smaller space occupied by the black colour at the base of the bill; the yellowish colour of the irides; the greater extent of the dark colour on the breast, which reaches further both upwards and downwards, than in the common species, and is, I think, at no age in such strong contrast with the colour of the neck and head, and by the purple tint and finer texture of the neck and breast feathers, by the white bar on the wing, and by the much darker tint of the freckled parts.

Internally, the eye, when removed from the head, was, in Mr. Gurney's bird, found to be considerably larger than that of 'Fuligula ferina.'

Mr. Fisher, however, has recently, in a letter to me, expressed his doubt whether the bird is not a variety between two species, and such I think it to be. I have endeavoured to give a concise and clear view of the different accounts and opinions, which, at first sight, must seem to a casual reader to be somewhat confused. It appears on the whole to be concluded that the supposed new species must be assigned to the 'Index Expurgatorius.'

# FERRUGINOUS DUCK.

WHITE-EYED DUCK. RED DUCK. CASTANEOUS DUCK.

*Anas ferruginea,* PENNANT. MONTAGU.
*Fuligula nyroca,* SELBY. JENYNS.
*Nyroca leucophthalmos,* FLEMING.

[illegible] Duck. *Ferruginea*—Ferruginous, rust-coloured.

In Europe this Duck is found principally in the eastern parts, namely, in Russia, Italy, and Hungary, but also in Iceland, Sweden, Denmark, Norway, Spain, France, Holland, and Switzerland, though only rarely in the latter-named country. In Asia it also occurs in Persia and India, and in Africa in Nubia and Egypt.

It attaches itself for the most part to the sequestered parts of fresh-water lakes and rivers; and at times to the bays and estuaries of the sea.

In Yorkshire, a Ferruginous Duck was taken in a decoy in Coatham Marsh, near Redcar, by the mouth of the Tees, on the [illegible] of March, 1850.

Mr. Chaffey, of Dodington, Kent, has informed me that one was killed off the coast near Dover, in the winter of 1849-50. In Oxfordshire a bird of this species was shot at Cornwell, near Chipping Norton, December the [illegible], 1847. A pair were killed near Oxford, in the year [illegible], another pair subsequently. In Suffolk one was shot on the coast early in April, 1848. In Norfolk also, a [illegible] was killed on the Meer, Great Yarmouth, in the [illegible] It has occurred in that neighbourhood in a [illegible] instances. A

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Mr. Chaffey, of Dodington, Kent, has informed me that one was killed off the coast near Dover, in the winter of 1849-50. In Oxfordshire a bird of this species was shot at Cornwell, near Chipping Norton, December the 3rd., 1847. A pair were killed near Oxford, in the year 1832; another pair subsequently. In Suffolk one was shot on the coast early in April, 1848. In Norfolk one, a male, was shot by the Meer, Great Yarmouth, on the 16th. of April, 1850. It has occurred in that neighbourhood in a few rare instances. A specimen was purchased in the Cambridge market. Several have been bought in London.

This bird has been observed in Orkney, though very rarely. In Scotland Sir William Jardine procured one, but only one, in the Edinburgh market.

In September and October this Pochard migrates southward, and returns in March and April.

The present species is kept well in confinement, if provided with water. It is reported to be very good to eat.

It swims with the greatest expertness, and dives equally well, remaining a long time below the surface. In flight it is somewhat heavy. It generally flies low, except when on its migration.

It feeds in the mornings and evenings, and at night, if there be moonlight, the roots, buds, shoots, and seeds of various water-plants composing its food, together with frogs, water-insects, and the fry of fish.

The note is a 'curr, curr.'

This Duck, like the others of its kindred, builds its nest near rivers, ponds, and marshes. It is placed among, and composed of, reeds, and other such materials. The male bird leaves the female soon after she has begun to sit. The nest is well supplied with down from the breast of the parent mother, as a lining.

The eggs of this species are white, with a slight tinge of green, and nine or ten in number. They are laid by the beginning of June, and are hatched in twenty-two or twenty-three days.

As Frederick Bond, Esq. has informed me, the Ferruginous Duck bred in the year 1854, in the gardens of the Zoological Society, London; and that it paired in that or the preceding year with the Tufted Duck.

The female conducts her brood to the water as soon as hatched, and there provides them for the present with food.

Male; length, one foot four inches to one foot four and a half; bill, dark bluish grey, the tooth dusky; iris, white; the head, which is small, and neck, deep chesnut red: this is succeeded by a band of darker colour, or blackish brown, which, about the nape, runs into the colour of the back. Chin, partly white, dull in colour; throat and breast on the upper part, bright ferruginous, the latter below yellowish white or white, the sides dusky with broad pale grey or ferruginous brown edges; back, dusky blackish brown, with a gloss of green and purple finely powdered or speckled with reddish brown.

The wings have the first quill feather the longest; greater wing coverts, white at the base, forming a bar across the wing, and otherwise rather light dusky brown, glossed with green and purple, and finely speckled with reddish brown; lesser wing coverts, rather light dusky brown, glossed with green and purple, and finely speckled with reddish brown; primaries, dusky blackish brown glossed with green, part of the inner webs white, and the bases; secondaries, black at the ends, the remainder, including the speculum, white, below it a black band edged with greyish white; tertiaries, dusky brown glossed with green and purple, finely speckled with reddish brown. The tail, of fourteen feathers, is dusky brownish black, with a faint tinge of ferruginous—it is slightly wedge-shaped; upper tail coverts, dusky ferruginous black, which colour comes downwards on the sides, distinctly contrasting with the white of these parts; under tail coverts, white, shewing a triangular-shaped spot. Legs and toes, which are rather large, dusky brownish grey, the middle toe is rather longer than the outer one; claws, black; webs, dusky.

In the summer change of plumage the male resembles the female, but is somewhat brighter-plumaged, the spots not so large, and more on the white of the breast.

The female, rather less in size than the male, and her colours less pure, especially the chesnut and white on the breast, has the bill blackish grey; iris, not so distinctly white; head, crown, and neck, dark brown, with edgings of reddish or chesnut brown to the feathers, the sides of the head the brightest coloured; the ring round the neck is indistinct; the white on the chin is less extended than in the male. The breast above, brown, the feathers margined with pale chesnut brown, lower down mottled all over with dusky and pale brown, below white, on the sides and flanks yellowish brown; back above, deep glossy dusky brown, with paler edgings to the feathers, below dull white. The ridge of the wings is white; primaries, greenish black at the ends, light-coloured towards the base; secondaries, white, tipped with greenish black, thus exhibiting the speculum. Tail, blackish brown; the upper tail coverts do not descend to the sides with the black markings; under tail coverts, white. Legs and toes, blackish grey.

The young is of duller tints, the upper parts being of two shades of brown, and the lower dusky brownish grey; by degrees, however, it appears 'in propriâ personâ.'

The plate is from a beautiful drawing taken from life by John Gatcombe. Esq., of Wyndham Place, Plymouth.

# SCAUP.

## SCAUP DUCK. SCAUP POCHARD.

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|---|---|
| *Anas marila,* | PENNANT. MONTAGU. |
| *Aythya marila,* | SELBY. JENYNS. |
| *Fuligula marila,* | FLEMING. |

*Anas*—A Duck. *Marila*—?

THE native countries of this species are those portions of the three continents of the old world which, under the name of the Arctic regions, belong to the frozen north. From these it comes southward in the autumn, to spend a milder winter. To the former category belong Baffin's Bay, Hudson's Bay, the Bay of Fundy, Greenland, Iceland, Siberia, Lapland, Norway, Sweden, Finland, and Russia, and to the latter the United States, and Mexico, Holland, France, Germany, Italy, and Switzerland. In America it is likewise found on the large rivers—the Ohio, Missouri, and Mississippi.

Their preference is for the sea-coast, especially where of a low and muddy character, and from this it advances into inlets, bays, estuaries, and the tidal parts of rivers. This remark, however, must only be taken as applying to the winter half of the year. They breed in different parts of North America as well as farther north.

They are often or regular visitants to such parts of the coast as are suitable to their habits.

In Yorkshire the Scaup Duck has been shot near Doncaster, York, Huddersfield, Barnsley, Sheffield, and [illegible], and is, on the coast, a not uncommon species in the winter.

It is more or less frequent in the county of Northampton, says the Hon. T. L. Powys, in a severe season.

shades of brown, and the lower dusky [illegible] [illegible] hundreds of [illegible] in proper proportion.

The plate is from a beautiful drawing [illegible] by John [illegible], Esq., of Wyndham Place, [illegible]

# SCAUP.

## SCAUP DUCK. SCAUP POCHARD.

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|---|---|
| *Anas marila,* | PENNANT. MONTAGU. |
| *Fuligula marila,* | SELBY. JENYNS. |
| *Nyroca marila,* | FLEMING. |

*Anas*—A Duck. *Marila*—...........?

THE native countries of this species are those portions of the three continents of the old world, which, under the name of the Arctic regions, belong to the frozen north. From these it comes southward in the autumn, to meet a milder winter. To the former category belong Baffin's Bay, Hudson's Bay, the Bay of Fundy, Greenland, Iceland, Siberia, Lapland, Norway, Sweden, Finland, and Russia, and to the latter the United States, and Mexico, Holland, France, Germany, Italy, and Switzerland: in America it is likewise found on the large rivers—the Ohio, Missouri, and Mississippi.

Their preference is for the sea-coast, especially where of a low and muddy character, and from this it advances into lochs near it, estuaries, and the tidal parts of rivers. This remark, however, must only be taken as applying to the winter half of the year. They breed in different parts of Scandinavia, as well as farther north.

They are with us regular visitants to such parts of the coast as are suitable to their habits.

In Yorkshire the Scaup Duck has been shot near Doncaster, York, Huddersfield, Barnsley, Sheffield, and Sutton-upon-Derwent, and is, on the whole, a not uncommon species in the winter.

It is more or less frequent in the county of Northampton, says the Hon. T. L. Powys, in a letter to me.

In Cornwall one, a female, was shot at St. Keverne, near Falmouth, the 19th. of January, 1850. In Lincolnshire they have been met with on Croxby Lake. In Sussex, near Lewes. In Oxfordshire it is not an unfrequent winter visitant. One was caught on the 24th. of December, 1829, on the basin of water in the quadrangle of Christ's Church College, Oxford, where it had settled in company with two others. In Norfolk these birds are not uncommon about Yarmouth. The same remark applies to the coasts of Dorset and Hants. In Surrey a Scaup was shot on a piece of water near Milford House, Godalming, on the 8th. of December, 1846.

They are winter visitants to Shetland and Orkney.

In Ireland also they are described as common.

In one instance the Scaup Duck has been supposed to breed in this country, namely in Scotland, in Sutherlandshire, where a female attended by her young one was found by Sir William Jardine, Bart., in the month of June, 1834.

They arrive about the end of October or beginning of November, according to the weather, and stay till March, when they depart to the north to build, lay, and rear their young.

These birds appear to go in small flocks of ten or a dozen. On their first arrival, they are naturally tame and ignorant of danger, but soon come to learn the lesson which has to be learnt for their security by most other birds, and become exceedingly shy and wary. They are very readily reconciled to comparative confinement, and are in such case said to become good for the table. Many are sold in the markets for the purpose, but without this preparatory change in condition.

They dive well, and remain under water for a full minute. They swim very fast, both on and below the surface, the former deep in the water. Meyer writes as follows of them: —'It is a beautiful sight to observe a string of these birds swimming on the sea, and especially to notice the usual manner in which they rise from that element. When one of the extremities of such a long body raises itself in the air, the rest rise as their turn comes; and thus they are, as it were, drawn up one by one from the surface of the water; and when pursuing their course, they continue to keep the same order in the air; on alighting the same regularity is observed, unless the birds are on their migratory passage, during which time they do not always follow each other so regularly, owing

# TUFTED DUCK.

## TUFTED POCHARD. BLACK WIGEON.

*Anas fuligula*, PENNANT. MONTAGU.
*Fuligula cristata*, SELBY. JENYNS.
*Nyroca fuligula*, STEPHENS.

*Anas*—A Duck. *Fuligula*—......?

THE Tufted Duck is yet another northern species, frequenting, in Europe, Lapland, Finland, Norway, and Sweden, and coming southwards before winter to the warmer climes of Italy, France, Germany, Holland, Switzerland, and Hungary. In Asia, it spreads over parallel districts, and is found in the neighbourhood of the Caucasian range, in Persia, and, eastward, in India, in the Dukkun and Himalaya, as far as Japan. It is stated also to exist in the corresponding latitudes of North America.

Its haunts are the still waters of inland lakes, ponds, tarns, and the estuaries, inlets, and bays of the sea; the former in the summer, the latter in the winter season of the year.

A few pairs of these birds breed in Sweden, as in the neighbourhood of Lulea, on the Gulf of Bothnia, and other places in the south; but the vast majority seek the retirement of the north.

In Yorkshire, this species has been procured near Doncaster, Leeds, Barnsley, Huddersfield, York, Malton, and divers other places. The Tufted Duck has been not unfrequently obtained in Cambridgeshire. It also has been killed several times in hard winters near Lilford, Northamptonshire, the Hon. T. L. Powys informs me; and is also occasionally seen on [illegible] Lake, Lincolnshire, the Rev. [illegible] has written me word. In the county of Durham one was shot near Stockton-

In Cornwall [illegible] and also on the [illegible] near Falmouth. [illegible] have been [illegible] In [illegible] was [illegible] of [illegible] Oxford [illegible] In Scotland [illegible] Falmouth. [illegible] In Ireland [illegible]

[illegible]

It breeds also [illegible]

In [illegible] has been supposed to breed in this country, [illegible] in Northumberland, where [illegible] was found by [illegible] of June, 1834.

They [illegible] October or beginning of November, [illegible] and stay till March, when they [illegible] build, lay, and rear their young.

[illegible] flocks of ten or a dozen, [illegible] and [illegible] of [illegible] which has to [illegible]

They [illegible] for a few minutes. [illegible] the [illegible] of them [illegible] swimming on the [illegible] When one of the [illegible] itself in the sky, the [illegible] they are, as it were, [illegible] the water, and [illegible] to keep the [illegible] is observed, [illegible] during which [illegible]

# TUFTED DUCK.

TUFTED POCHARD. BLACK WIGEON.

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|---|---|
| *Anas fuligula*, | PENNANT. MONTAGU. |
| *Fuligula cristata*, | SELBY. JENYNS. |
| *Nyroca fuligula*, | FLEMING. |

*Anas*—A Duck. *Fuligula*—..........?

THE Tufted Duck is yet another northern species, frequenting, in Europe, Lapland, Finland, Norway, and Sweden, and coming southwards before winter to the warmer climes of Italy, France, Germany, Holland, Switzerland, and Hungary. In Asia, it spreads over parallel districts, and is found in the neighbourhood of the Caucasian range, in Persia, and, eastward, in India, in the Dukkun and Himalaya, as far as Japan. It is stated also to exist in the corresponding latitudes of North America.

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A few pairs of these birds breed in Holland; also in the neighbourhood of Lulea, on the Gulf of Bothnia, and other places in the south; but the vast majority seek the retirement of the north.

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In Scotland, one of these birds was seen by the Rev. James Smith, on the River Dovern, near Banff, in Aberdeenshire. Sir William Jardine has shot some on the River Annan, in Dumfriesshire, and noticed others on the waters of Lochleven, in April, 1843. He mentions that it is observed on the Solway.

Tufted Ducks, though not in great numbers, visit Orkney every winter: they are most abundant during severe seasons.

In Ireland also they are not uncommon.

In Yorkshire these birds have been known to breed; a family consisting of old and young were observed on Malham Water, otherwise called Malham Tarn, near Skipton-in-Craven, in the first or second week in August, 1849, by the Rev. Robert Bryan Cooke, Rector of Wheldrake, near York. The Tufted Duck is known also to stay in some instances through the summer at Hornsea Mere, in Yorkshire. The nest of this bird has been likewise found at Osberton, Nottinghamshire, by Francis Foljambe, Esq. They have bred in confinement in the gardens of the Zoological Society in the years 1839, 1840, and 1841.

The present species carries on its progressive northerly movement in early March, and continues it till the middle of April, some tarrying till May. Its migration is conducted at night, and chiefly, it appears, when there is no moon.

They roost on the water during the day-time, and consort together in small companies of a few pairs, or in single pairs, as well as in large flocks. They also associate at times with Ducks of other kinds. They seem to be shy birds. They are considered excellent to eat.

They are able to fly with great swiftness, and the wings of a large flock overhead make a considerable noise. They dive well, and swim with equal cleverness. Like all the other Ducks, 'I'm afloat! I'm afloat!' is the motto they most rejoice in.

Their food consists of water-insects, small shell-fish, and mollusca, young frogs and tadpoles, and the roots, seeds, and buds of plants.

These birds breed along the stony shores of the sides of inland waters, both lakes and rivers, among the cover of vegetation, more or less thick, with which such are usually bordered.

The receptacle for the eggs, for it can hardly be called a nest, is composed of stalks and grasses. It is not made till the end of May or beginning of June.

The eggs vary in number from eight to ten. They are of a pale buff colour, with a tinge of green.

The male bird leaves the female after she has begun to sit.

This species, as Frederick Bond, Esq. has informed me, paired with the Ferruginous Duck, as I have mentioned in the account of the latter, in the year 1853 or 1854, in the gardens of the Zoological Society.

It is a thick-set bird. Male; weight, about twenty-five ounces; Montagu says that they vary, according to the condition they are in, from twenty-one to thirty-one ounces; length, one foot five inches; bill, deep bluish lead-colour, a portion of the tip and the tooth black: it is rather widened towards the point. Iris, golden yellow. There is a long dependant crest of very narrow black feathers, with purple and green reflections. The head, neck, and nape, are of the same colour. At the chin is a small triangular-shaped white mark; throat and breast, on the upper part black, the feathers tipped with grey; below, the latter is glossy white, or cream-coloured white, the thighs blackish. Back, dusky olive brown, with a slight violet tinge, very minutely speckled with grey, or yellowish white, which gives a subdued tone to the colouring of this part, the lower portion black.

The wings have the first and second quill feathers of nearly equal length; greater wing coverts, white, the tips broadly finished with black; lesser wing coverts, dusky olive black. The first three or four primaries pale brown, dusky olive black on the outer webs and the tips, the rest more or less white towards the base; of the secondaries the four or five inner ones are dusky olive black, the remainder forming the speculum white, with greenish black tips, and slightly edged with the same colour; tertiaries, dusky greenish olive black, minutely spotted with grey or yellowish white. The tail, which consists of fourteen feathers, and is short and somewhat wedge-shaped, is black; upper tail coverts, black; under tail coverts, black. Legs and toes, dark greyish blue black; the claws and webs dusky black.

In summer the male assumes a brown plumage, the middle part of the breast white, the lower dull yellowish.

The female is of a dull rufous brown colour, the edges of the feathers paler. The upper mandible is dusky on the inner part, the remainder greyish blue black, and paler than in the male; the feathers about the bill pale yellowish, or whitish; iris, yellow. The crest is small, but partially developed in old birds, and deep rufous brown in colour. The breast on the centre part is yellowish white, but dull, being tinged with grey, or pale greyish brown, below white, with faint waves of pale brown; back, blackish brown, the feathers on the sides tipped with a paler shade. The speculum white; under tail coverts, white, speckled and barred with pale brown. Legs and toes, greyish blue black, paler than in the male.

The young bird resembles the female: the forehead varied with white, the head dark brown, at first without, afterwards with a slight tuft or crest; the upper part of the breast deep brown, below white; the back brown, more deeply bordered with paler brown. The speculum is indistinct. After the moult the males turn much darker, and lose the white feathers about the base of the bill.

# LONG-TAILED DUCK.

NORTHERN HARELD. CALLOO. COAL-AND-CANDLE-LIGHT.
LONG-TAILED SHIELDRAKE. SHARP-TAILED DUCK.

Anas glacialis, PENNANT. MONTAGU.
Clangula glacialis, FLEMING. SELBY.

ANAS—A Duck. [illegible]

This is yet another of these hardy birds which revel in the cold of the extreme north. It is a very elegant and handsome species.

They are very plentiful in the hyperborean regions—Iceland, Nova Zembla, Spitzbergen, and others, and on the European continent are found in Russia, Denmark, Norway, Lapland, and Sweden, along the shores of the mainland, as well as among the islands of the Baltic. They have been known, too, in Germany, Italy, France, Switzerland, and Holland. In America they are equally abundant in Greenland and the North Georgian Islands, Labrador, Hudson's Bay, and about Newfoundland, and come southwards, in winter, as far as Carolina: likewise in the northern parts of Asia—Kamtschatka and others.

They frequent the offing of the sea-coast, and at times the tide in the vicinity, but are rarely seen either inland or often far out at sea.

In Yorkshire, Edward Dawson, Esq., of Osgodby Hall, shot one, a female, in the month of November, [illegible] on [illegible] Common. One was shot on the coast in the winter of 1837, as Mr. William Felkin, Jun., of Carrington, near Nottingham, has informed me. It has also occurred near Driffield, Doncaster, and York. In Oxfordshire one was killed near Standlake in rarely black. Legs and toes, dark grayish blue-black; the claws and toes dusky black.

In summer the male assumes a brown plumage, the [illegible] parts of the breast white, the lower dull yellowish.

The female is of a dull yellow brown colour, the edges of the feathers paler. The upper mandible is dusky at the [illegible] with the [illegible] greyish blue black, and paler than in the male, the feathers along the [illegible] pale yellowish or whitish [illegible]. The crest is small, but partially developed, [illegible] yellow brown in colour. The breast in the middle part is yellowish white, but dull, being tinged with [illegible] yellowish brown. Belly white, with [illegible] back, blackish brown, the feathers of the [illegible] with a paler shade. The specimen [illegible] pale brown. Legs and claws greyish blue black, paler than in the male.

The young at first resembles the female; the [illegible] dark brown, at first [illegible], afterwards [illegible] the upper part of the [illegible] the back brown, [illegible] barred with pale brown. The specimen is [illegible] has much [illegible], and has [illegible] of the bill.

# LONG-TAILED DUCK.

NORTHERN HARELD. CALLOO. COAL-AND-CANDLE-LIGHT.
LONG-TAILED SHIELDRAKE. SHARP-TAILED DUCK.

| | |
|---|---|
| *Anas glacialis,* | PENNANT. MONTAGU. |
| *Clangula glacialis,* | FLEMING. SELBY. |

*Anas*—A Duck. *Glacialis*—Belonging to ice.

THIS is yet another of those hardy birds which revel in the cold of the extreme north. It is a well-defined and handsome species.

They are very plentiful in the hyperborean regions—Iceland, Nova Zembla, Spitzbergen, and others, and on the European continent are found in Russia, Denmark, Norway, Lapland, and Sweden, along the shores of the mainland, as well as among the islands of the Baltic. They have been known, too, in Germany, Italy, France, Switzerland, and Holland. In America they are equally abundant in Greenland and the North Georgian Islands, Labrador, Hudson's Bay, and about Newfoundland, and come southwards, in winter, as far as Carolina; likewise in the northern parts of Asia—Kamtschatka and others.

They frequent the offing of the sea-coast, and at times the lochs in its vicinity, but are rarely seen either inland, or often far out at sea.

In Yorkshire, Edward Dawson, Esq., of Osgodby Hall, shot one, a female, in the month of November, 1852, on Riccall Common. One was shot on the coast in the winter of 1851, as Mr. William Felkin, Jun., of Carrington, near Nottingham, has informed me. It has also occurred near Driffield, Doncaster, and York. In Oxfordshire one was killed near Standlake in the winter of 1840: the species has also occurred on the River Isis, near Kennington. In Derbyshire some visit the Trent in hard winters. In Durham it has occurred near Bishop Auckland; also on the Cumberland coast. In December, 1849, after a long chase, one of these birds was obtained by Arthur Dymoke Bradshaw, Esq., of Southampton, as that gentleman has written me word. In Huntingdonshire one was killed in January, 1838. In Devonshire a few have been obtained —one near Knightsbridge; also in Dorsetshire, as likewise in Kent, Essex, and Suffolk. They sometimes are on sale in the London markets. In Norfolk the species in the adult state occurs occasionally, though rarely, on Breydon, near Yarmouth, in hard winters. The immature birds are not so uncommon.

In Scotland they are plentiful on the Frith of Forth, and in Aberdeenshire, near Banff. They also appear in considerable numbers in Orkney and Shetland.

In Ireland they rank among the occasional visitants. The counties of Galway and Dublin have furnished specimens. The late William Thompson, Esq., of Belfast, has mentioned his having procured specimens four years successively from that neighbourhood.

During the day-time, if not engaged in feeding, they may be seen off the shore, resting on the rising and falling waves, or every now and then getting on the wing, and 'flying round and round in circles, chasing one another, squattering along the surface, half flying, half swimming, accompanying all these gambols with their curious cries. When the storms are at their loudest, and the waves running mountains high, then their glee seems to reach its highest pitch.' Towards night they all fly off together for some favourite resting or feeding ground, so to call what is only a ground-swell.

By the end of October or beginning of November, small flocks of these birds assemble in suitable localities in the northern parts of Scotland, from regions still farther north, and during the succeeding months of December and January, according to the severity of the weather, their numbers are added to by fresh arrivals, till large flights are collected together; until this is the case they generally go in small parties of three or four, one a male, the others females. Towards the end of March they begin again to separate, and this goes on till the second or third week in April, or even to the latter end of May, as the season is comparatively mild or severe. In brief, 'They arrive with the first frown of winter, and depart with the earliest blink of summer sun.' They migrate by night in large flocks.

These Ducks shun the society of other species, and keep their own company alone; so they also soon learn to avoid the approach of man, and make off while the gunner is yet distant: this, at least after they have learned the wisdom of doing so, for otherwise they are far from shy. In the spring they become 'noisy and restless in their movements. There appear to be contentions among the males; and they flutter along the surface, hurrying through each others' ranks, and splashing the water in all directions.' They are true sea-birds, and pass almost their whole time on the waves, floating about when not feeding, and taking their rest there at night, 'rocked in the cradle of the deep.'

In the winter season small flocks of thirty or forty individuals congregate to the number of five or six hundred, and cover the surface of the land or water.

Mr. Charles St. John has given a good account of the habits of these birds. They swim well and dive expertly for their food, one keeping watch above while the others are below. They remain down for a considerable time, and when feeding are constant in their descents, after each necessary coming to the surface, dipping under, one after the other, with a curious kind of movement. Thus they drift along with the flowing tide, and ride at ease over the heavy surf, or plunge into the midst of the wildest waves.

'When a thin crust of ice forms during the night, the female may be often seen breaking a way with her wings for her young brood.' Their ordinary flights are of short extent, and at no great height above the sea, into which they suddenly drop—their natural home. 'Unless it is obliged by some sudden necessity to take wing, it does not prefer that mode of changing its position.'

They feed on small shell-fish, mollusca, crustacea, shrimps, and other marine insects, which they fish for during the day, diving to a depth of from ten or twelve, to twenty or twenty-five yards. When forced by severe weather to a greater distance than ordinary from the shore, so as to be obliged to dive to a still greater depth for their food, they are said to become thin and weak. They appear also to swallow sea-weed and small fragments of sand, and in the breeding-season, when thrown in the way of vegetable diet, are said to partake of the roots, leaves, buds, and seeds of water-plants.

The note is expressed by the word 'calloo,' and again by the syllables 'our, o, u, ah,' or 'our' alone. When repeated together, the sounds are said to bear a close resemblance to the words 'coal-and-candle-light.' Meyer gives 'Wark, wark, wark,' and 'ah, aulik.' The Americans, 'South Southerly;' the Kamtschatdales, and the North American Indians, 'Caccamee,' and 'Ha-Ha-Way,' all of which latter are, says Mr. Selby, to a certain degree, expressive of its note.

The voices of a number of these birds together have a musical sound, and the harmony has been compared to the distant strains of the Scotch bagpipes. Their call-notes are uttered all the day, when the birds are collected together, and both male and female are constant in its use. The noise of the flock is heard to a considerable distance.

This species nidificates about inland lakes, ponds, and bogs, among the plants and low brushwood that afford cover near the water's edge. The nest is nothing more than a few stems of reeds, rushes, or grass, lined with the down of the mother bird, the quantity being added to as the number of eggs increases. Many breed in the same vicinity.

'About the latter end of April,' says Meyer, 'the birds arrive in pairs at their breeding-places, and in May the female lays. By the end of June or the beginning of July the young make their appearance, and are soon led to the sea-shore, and instructed to swim, dive, and provide for themselves. The male, who leaves the care of the nursery to his mate, joins his family on their arriving at that locality, and accompanies them in their migratory journey and winter sojourn.'

The eggs are usually from six to ten in number, but twelve have been found. They are of a pale greenish or bluish white colour, tinted with buff.

The Long-tailed Duck is a bird of striking and curious appearance. Male; length, one foot ten inches; the bill is short, dusky black at the base and towards the sides, the tooth dusky black, the remainder of the upper mandible deep red: the edges of both mandibles are deeply pectinated. Iris, yellow; head on the crown, the feathers of which are long with hair-like beards, silvery cream white, the forehead and sides, which are grey, have a roseate tinge; neck in front, white; on each side of it, just below the head, there is an oblong patch, the upper part of which is blackish rusty brown, and the lower yellowish brown; nape, white; chin and throat, white; breast above, deep chocolate blackish brown, below white, the sides tinged with grey. Back on the upper part, dark chocolate brown, on the lower black.

Greater wing coverts, dusky; lesser wing coverts, chocolate brown; primaries, dusky; the speculum yellowish brown with the edge lighter; tertiaries, white. Tail, chocolate brown, except the two long middle feathers, which are dusky, and the outer ones, which are white; upper tail coverts, blackish on the middle part, that is, the four central feathers, and white on the sides, the remaining ones brown deeply margined with white, except the outermost, which are entirely white. The two middle feathers are narrow in shape, and three inches and a half longer than the others, in all nine inches in length; under tail coverts, white. Legs and toes, greenish or yellowish ash grey colour; the inner toes and the small ones behind are margined with small lateral webs; claws, black; webs, blackish.

The female has the bill blackish grey, the upper mandible orange yellow across the middle. Head on the front and sides, greyish white, on the back cinereous; crown, dark purple brown, as is a patch towards the back of the side of the head; neck, dull white; chin and throat, dark purple brown; breast above, deep reddish brown, the edges of the feathers darker, below white; back, dusky brownish black. Greater and lesser wing coverts, margined with brownish yellow and greyish white. Tail, purple brown. Legs and toes, grey, the joints darker; webs, dark grey.

Sir William Jardine states that there is an extraordinary variation in the summer and winter dress of this bird. In a specimen procured in summer the forehead and sides of the head, brown; crown, black; back of the head, white; neck, deep black, a few white feathers on the front; chin, white; breast, deep black, the sides white. Back on the upper part, black, with broad margins of reddish brown, and a few white feathers intermixed; on the lower part, deep brownish black. The secondaries have the outer webs tinted with reddish brown, forming an indistinct speculum. Tail, deep brownish black; upper tail coverts, deep brownish black; under tail coverts, white.

He adds, in winter the bill is black at the base, the tooth black, behind it is a deep band of lake red; the forehead and sides of the head are pale greyish brown, back of the head, white; neck on the back, white, on each side of it there is a large oval-shaped patch of blackish brown, ended below with yellowish or reddish brown; throat, white; breast on the upper part, white; back on the upper part, white, on the lower, brownish black. The tail graduated, the middle feathers being narrow and much elongated, brownish black in colour; upper tail coverts, brownish black; under tail coverts, white. Legs and toes, yellow grey.

In the female in winter the crown is dark yellowish brown; the spot on the neck yellowish brown; nape, also yellowish brown. Breast above, yellowish brown; below, white; back, blackish brown. The tail is not elongated.

# HARLEQUIN DUCK.

## HARLEQUIN GARROT.

*Anas histrionica,* PENNANT. MONTAGU.
*Clangula histrionica,* JENYNS. SELBY.

*Anas*—A Duck. *Histrionica*—Histrionic.

THE Harlequin Duck, which derives its name from its variegated plumage, though on the whole it is of a dark appearance, is another northern species, and in Europe appertains the most to Iceland, Russia, Sweden, and those parts, and has occurred in France and Germany. In Asia it is known in Kamtschatka, and in Siberia, about Lake Baikal, and thence proceeds, according to the season, to the lower latitudes of Lake Aral and the Caspian Sea. In America it is common about the Bay of Fundy, Labrador, Newfoundland, Hudson's Bay, Greenland, and in winter advances southwards to the United States. It is mentioned also by Dr. Richardson as occurring in the vicinity of the Rocky Mountains.

It is altogether, as is related, a bird of the sea and its inlets, and the mouths of rivers, excepting during the breeding-season, and even then it appears not to go more than a mile or so from such to small lakes or other waters. Its occurrence farther inland is merely the result of some fortuitous circumstance.

These birds breed in Iceland.

A Harlequin Duck was once purchased in the market at Yarmouth, in Norfolk: an adult male is said to have been killed near that place. A female of this species was shot on the River Don near Doncaster. In Devonshire, one in the winter of 1802. Two the same season were purchased in the side of the head are [illegible] back of the head whitish neck on the [illegible] each side of it there is a large oval-shaped [illegible] brown, edged below with yellowish or [illegible] white, except on the upper part [illegible] part white, of the brown, [illegible] feathers lower surface [illegible] black in colour; [illegible] with [illegible]

In the female [illegible] brownish [illegible] the [illegible] yellowish [illegible] back, [illegible]. The [illegible]

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London market by Mr. Yarrell. In Cheshire one, a female, was shot by the gamekeeper of Sir Philip de Malpas Grey Egerton, Bart.

In Scotland a pair were formerly obtained by Lord Seaford; another was shot near Gordon Castle, on the Spey, Banffshire, in October, 1851. In Orkney one, a female, has occurred.

During its summer migration, says Selby, it is found upon the coast, and frequently in deep water, at a considerable distance from land.

When not in pairs these Ducks are seen in flocks, being sociable among themselves. They are very shy birds, it is said, making off on wing at the slightest alarm. The male and female seem much attached to each other.

They dive with quick expertness, swim equally well, frequently nodding the head, but fly in a more laboured manner, the wings being short and quickly beaten.

They feed on different kinds of shell-fish, small fry, insects and their larvæ, frogs, tadpoles, and water-plants.

The note resembles the syllables 'eck, eck,' and is constantly repeated.

The Harlequin builds among low bushes and plants, in the precincts of streams and lakes, and the neighbourhood of the sea, not far from the water's edge; and 'feathers its nest' with down from its own breast, the outerside materials being dry leaves, stalks, grass, and reeds, arranged in a circular manner to the height of two or three inches.

The eggs are from five or six to seven in number, rarely more than the former, according to Audubon, but some say as many as eight, ten, or twelve, and of a white or very pale buff colour, with a tinge of green. 'The texture of the egg is very fine, but without polish.'

The female is very attentive to her brood. The male leaves them to her care and returns to the sea.

Male; length, one foot five inches; bill, bluish black; iris, orange reddish brown, behind it is a large white space, which colour goes backward to the nape on the sides of the head in two narrow bands, and below it is another stripe of bright chesnut, the middle band from the bill to the hind part of the head and down the neck velvet black, thus bordered on each side by the white lines already mentioned. Head on the sides, crown, neck, and nape, blackish grey, glossed with purple violet, with the exception of the white and brown streaks just spoken of, the white spot on the hinder part of the sides of the head, and another white streak running down the sides of the neck near the back part, originating between the white spot and the junction of the two other lines on the nape. Chin and throat, black, with a purple violet gloss: between the latter and the breast is a white band, edged narrowly below with black. The breast is crossed at the middle by a crescent-shaped band of white, bordered above and below with black; the upper part between the two bands is bluish grey, the lower part below the second one dusky greyish black, darker, becoming deep reddish brown, towards the under tail coverts; the sides are rufous chesnut, and near the tail are a few large strong feathers with white tips, which make a small but distinct spot. The back on the upper part is purple grey, on the middle brownish black, with a bloom of deep blue or purple grey, on the lower part dusky black.

The wings have the first quill feather the longest; greater wing coverts, bluish black, tipped with white; of the lesser wing coverts some are white, with a narrow greyish border to the feathers; primaries, dull brownish black; secondaries, also black, the outer webs forming the speculum are brownish black, glossed with deep blue; tertiaries, white on the outer webs, bordered with blackish brown. Tail, dusky black; under tail coverts, bluish black; legs and toes, dull bluish dusky black; webs, dusky.

The moult takes place, Audubon says, in July and August.

In the female the general plumage is sooty brown. Length, one foot two or three inches; before and behind the eye are patches of white; forehead, whitish; neck in front mottled with two shades of brown. Chin and throat, greyish white. Breast above, mottled with two shades of brown, below whitish, the sides also of two shades of yellowish brown and brownish grey, the flanks brown. Back, reddish brown, the margins of the feathers paler.

The young male in the first year resembles the female. The white collar is not gained till after the second moult.

According to Audubon, the young male in its first winter has the white spot over the eye mottled with grey, the line extending over the eye obscure, and the edging of the occiput faint reddish brown; bill, dusky. Head and neck, dull leaden blue, the crown darker; the two white marks exist on the neck, but are merely edged with darker blue; there are some indications of the white collar, and the band before the wing is marked, but much smaller than in the adult bird. In the third year the white collar is still incomplete, but all the white markings of the neck are edged with black. In the third year the sides of the breast are dark brownish grey, waved with yellowish red bars; the fore part is dull grey, the middle yellowish grey, spotted with bluish grey. The back greyish brown; primaries, dark brown; secondaries, not tipped with white. Tail, bluish grey, the end lighter coloured; in the third year the tail is becoming glossy bluish black; upper tail coverts, dusky—they turn to glossy bluish black in that year. Legs and toes, lead-colour.

# GOLDEN-EYE.

COMMON GOLDEN-EYE. GARROT. RATTLE-WINGS.
GOLDEN-EYE DUCK.

| | |
|---|---|
| *Anas clangula,* | PENNANT. MONTAGU. |
| " *glaucion,* | BEWICK. |
| *Clangula vulgaris,* | FLEMING. SELBY. |
| " *chrysophthalmus,* | JENYNS. |

*Anas*—A Duck. *Clangula. Clango*—To sound as a trumpet.

THE Golden-Eye is found in Iceland and the Ferroe Islands, and throughout Russia, Denmark, Lapland, Sweden, Norway, and Holland. It occurs also in Germany, Switzerland, Prussia, Saxony, Silesia, Hungary, Italy, and France. It belongs likewise to the northern parts of Asia, from Tartary, Persia, and the Caucasus, to Japan. It is said also to belong to North America.

They breed in the different countries of Scandinavia, and this not only in natural situations, but also in boxes placed for them by the inhabitants for the purpose.

The localities these birds frequent are principally the sea coasts, near the mouths of rivers, but also the borders of inland lakes, ponds, and streams, not those that are rapid and turbulent, but such as belong to the order described in the Old Version of the Psalms of David—

'Where [illegible] streams run soft and slow,
Amid the verdant meadows [illegible].'

When on the sea they prefer such a distance from the shore as will give a depth of two or three fathoms for the exercise of their foraging habits.

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The localities these birds frequent are principally the sea coasts, near the mouths of rivers, but also the borders of inland lakes, ponds, and streams, not those that are rapid and turbulent, but such as belong to the scenes described in the Old Version of the Psalms of David—

'Where peaceful rivers, soft and slow,
Amid the verdant landscape flow.'

When on the sea they prefer such a distance from the shore as will give a depth of two or three fathoms for the exercise of their foraging habits.

In Yorkshire the Golden-Eye has been obtained in plenty, though for the most part in immature plumage, near Doncaster, Hebden-Bridge, Barnsley, Leeds, York, Huddersfield, and elsewhere. In Norfolk they are not uncommon about Yarmouth, that is to say young birds, the old ones only occurring in severe weather. They are likewise met with in the fens in Cambridgeshire; also on the Shropshire meres. In Oxfordshire birds of this species not very unfrequently occur, but chiefly females and young males. In Derbyshire some are met with at times, though but rarely, on the Trent—two on the 9th. of March, 1848.

Individuals have been met with near Lilford, Northamptonshire, by the Hon. T. L. Powys, and others have occurred elsewhere in the county. W. Brooks Gates, Esq. tells me of one obtained at Weston Favell, near Northampton, the beginning of February, 1855. In Lincolnshire on Croxby Lake. In Sussex near Lewes. In the winter of 1847, Mr. M. C. Cooke informs me that one was shot, an immature bird, at Swanscombe, in Kent. In Cornwall it is scarce near Falmouth, but has occurred at Gwyllyn Vase, and one was shot near the former place January the 29th., 1848. In Durham one, a male, was shot near Stockton-on-Tees, on the 26th. of February, 1853; another at Bishop Auckland.

In Orkney and Shetland they are frequent; so also in Ireland.

They migrate the end of October and beginning of November, and again towards the end of March or beginning of April. Their numbers with us are regulated by the comparative severity or mildness of the winter. At the spring of the year they repair to the inland lochs.

They frequently unite in small flocks in winter. The old males are shy, but the females and their broods are less so. When they have been frequenting fresh water for some time, they become very good to eat. A female Golden-Eye has been preserved on the water in St. James's Park.

The Golden-Eye is strong and vigorous on the wing, and a whistling sound, peculiar to it, and from which one of its trivial names is derived, the wings being struck quickly and as if with effort, is produced by its flight. It dives with great expertness, and is below the surface on the slightest alarm. On the water it swims low. Meyer says 'When it dives it has been observed to raise itself again quickly by touching the bottom with its tail, and this it does so frequently that in many instances it will be found that the tips of its tail feathers are much worn.' He also adds, 'when on the wing, and pursued by birds of prey, it has the capacity of shooting down from the air into the water, and disappearing instantaneously below its surface.' Yarrell states that if five or six of these Ducks are together, they do not all dive at the same time, but that some of them keep a good look-out to prevent being approached and surprised by an enemy. Sir William Jardine says, on the contrary, that they are the more easily approached for that they all dive simultaneously. When thus stolen a march on, they seek safety by flight, and not by diving. On the land they walk in a shuffling and ungainly manner.

They make their food of shell-fish, frogs, and tadpoles, water-insects, mollusca, small fry, and the buds, seeds, and roots of various plants.

Their cry is hoarse and somewhat sibilous, but the former sound is more or less characteristic of all the Ducks, none of whom are wont to express their wants and wishes 'sotto voce.'

The Golden-Eye builds in the vicinity of lakes and rivers, giving a preference to the latter, particularly such as flow over falls and rapids. The Laplanders place boxes with holes in them in the trees in these localities, for the birds to build in, and thus procure the eggs, for the cotes are sure to be resorted to for the purpose of laying in. The nest is made of rushes and other herbage, lined with down. Mr. Hewitson found one in a hole in a tree, ten or twelve feet from the ground.

The eggs are of a greenish hue, and from ten to fourteen in number.

It appears that the old bird takes the young ones to the water by holding it under the bill between it and the neck.

Male; weight, nearly two pounds; length, one foot six to one foot seven inches; bill, bluish black, deep at the base, behind it is a round patch of clear white, observable in flight, even at a considerable distance; iris, golden yellow; forehead, brownish black. The head, which is large, is, on the crown, the feathers on the back of which are a little elongated, and capable of being much raised at will, as are the neck on the upper part, nape, chin, and throat, brownish black, glossed with green and violet; the lower part of the neck all round and the breast, white, or yellowish white in some, the sides dull greyish black, and there are a few streaks of velvet black on the flanks, the outer parts of the inner webs of the feathers being of that colour. Back, deep bluish black.

The wings have the first quill feather the longest; greater and lesser wing coverts, black at the base, the remainder white, with a few streaks of black; primaries, dusky black. Of the secondaries, seven are mostly white, the remainder dusky black; tertiaries, dusky black. Tail, dusky greyish black; it is rather long, and consists of sixteen feathers; upper tail coverts, bluish black; under tail coverts, white. The legs, which are short, and the toes, are orange yellow; the inner and hinder toes furnished with lateral webs, the latter large; webs, dusky black.

Female; bill, brownish black at the base, towards the tip yellowish orange brown; iris, pale yellow. Head, crown, neck on the upper part, nape, chin, and throat, rusty brown, the lower part of the neck or collar in front white. Breast on the upper part, greyish ash-colour, the centres of the feathers dark, below white or greyish white, the flanks blackish grey in rather a mottled manner, the margins of the feathers being paler than the rest. Back, brownish black, the edges of the feathers being paler, with a bluish grey tint. Greater wing coverts, white, the bases brownish black; lesser wing coverts, grey, tipped with white, the bases brownish black; primaries, dusky black; secondaries, partly white; tertiaries, dusky black. Tail, greyish black, the edges of the feathers bluish grey; upper tail coverts, greyish black; under tail coverts, mottled with greyish black. Legs and toes, pale dusky yellowish orange in front, the hind part blackish; webs, dusky.

The young male at first is like the female, but by degrees the brown of the head becomes darker, and acquires the glossy green, and the feathers become more elongated; the white patch shews itself, the back also grows darker, and more white is apparent on the wings. After the third moult the full plumage is put on.

The plate is from a drawing made by John Gatcombe, Esq., Wyndham Place, Plymouth.

# BUFFEL-HEADED DUCK.

## BUFFEL-HEADED GARROT.

CLANGULA ALBEOLA, JENYNS.
FULIGULA ALBEOLA, STEPHENS.

*Clangula. Clango*—To make a noise. *Albeola*—A diminutive from *Albus*—White.

THIS Duck is very common in North America throughout the Union, and has been observed also in California, among the Rocky Mountains, and again in Newfoundland, the Bay of Fundy, and the Fur Countries.

In our country the 'First on record' of this species, a male, was shot near Yarmouth, in Norfolk, in or about the year 1830. A previous one was mentioned by Donovan. In the same county one at Hunstanton, of which the Rev. W. C. Fearon, Vicar of that parish, has been so obliging as to send me word.

These birds go northwards to breed.

They dive with great quickness and facility.

They feed on shell-fish, shrimps, and water-plants.

The note is a mere croak.

Male; length, one foot three inches. The bill, which is small and narrow, is bluish black; iris, dark brown, behind it an oval-shaped patch of white, narrow in front, but wider behind, extending to the back of the head. Forehead, bluish black, tinged with rich purple and green. The feathers on the crown are elongated, forming a crest erectile at the pleasure of the bird. It and the neck above, with the exception of the white patch just mentioned, are bluish black, with the same rich tinge of purple and green; the lower part of it white. Nape, greyish white and throat, bluish black, tinged

# BUFFEL-HEADED DUCK.

## BUFFEL-HEADED GARROT.

| | |
|---|---|
| *Clangula albeola,* | JENYNS. |
| *Fuligula albeola,* | BUONAPARTE. |

*Clangula. Clango*—To sound as a trumpet. *Albeola*—A diminutive from *Albus*—White.

THIS Duck is very common in North America throughout the Union, and has been observed also in California, among the Rocky Mountains, and again in Newfoundland, the Bay of Fundy, and the Fur Countries.

In our country the 'First on record' of this species, a male, was shot near Yarmouth, in Norfolk, in or about the year 1830. A previous one was mentioned by Donovan. In the same county one at Hunstanton, of which the Rev. W. C. Fearon, Vicar of that parish, has been so obliging as to send me word.

These birds go northwards to breed.

They dive with great quickness and facility.

They feed on shell-fish, shrimps, and water-plants.

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Male; length, one foot three inches. The bill, which is small and narrow, is bluish black; iris, dark brown, behind it an oval-shaped patch of white, narrow in front, but wider behind, extending to the back of the head. Forehead, bluish black, tinged with rich purple and green. The feathers on the crown are elongated, forming a crest erectible at the pleasure of the bird. It and the neck above, with the exception of the white patch just mentioned, are bluish black, with the same rich tinge of purple and green: the lower part of it white. Nape, greyish; chin and throat, bluish black, tinged with purple and green; breast, white; back, black. Greater and lesser wing coverts, white; primaries, greyish black; secondaries, white; tertiaries, black. Tail, pale ash grey; upper tail coverts, pale ash grey. Legs and toes, yellow.

The female is less than the male. Length, one foot one inch. Head, crown, and neck, greyish brown, with a patch of white behind the eye; breast, dull white. Back on the upper part, greyish brown, on the lower part black. Greater and lesser wing coverts, dark greyish brown; primaries, dark greyish brown; secondaries, white; tertiaries, dark greyish brown. Tail, ash grey; legs and toes, bluish black.

The young male at first resembles the female.

I have arranged the above description from Yarrell's account.

# SMEW.

LOUGH DIVER. WHITE NUN.
WHITE MERGANSER. WHITE-HEADED GOOSANDER.
SMEW MERGANSER. RED-HEADED SMEW.

| | |
|---|---|
| *Mergus albellus,* | PENNANT. MONTAGU. |
| " *minutus,* | LINNÆUS. |
| " *Panonicus,* | GMELIN. |
| *Mergellus albellus,* | BEWICK. |

*Mergus*—A Diver. *Albellus. Albus*—White.

THE SMEW is an exceedingly elegant and handsome bird, though its plumage is plain, consisting only of the two primitive colours, so to call them.

It occurs in Iceland, Sweden, Russia, Holland, France, Germany, Switzerland, Greece; also in Asia, in Persia, Kamtschatka, and Siberia, Asia Minor, about the Caucasus and in Japan. It is known, though only as a straggler, in America, in the Fur Countries, United States; it belongs to Greenland.

It frequents the coast as well as rivers and inland waters, giving a preference, it would seem, to the latter, and not, like so many other birds we shall soon have to give account of, to the 'deep, deep sea.'

In Yorkshire one was killed at Sutton-upon-Derwent, near York, in May, 1852, as the Rev. George [illegible], Rector of that place, has informed me; several have been shot near Doncaster in hard winters; a few near Leeds; one at [illegible], January 24th, 1838; also at [illegible]. [illegible] the males more rarely, the females and young [illegible]. The same remark applies to Oxfordshire, and indeed [illegible] everywhere else. In the month of January, 1838, however, with purple and green; breast, white; [illegible] black. Greater and lesser wing coverts, white; primaries, greyish black; secondaries, white; tertiaries, black. Tail, dark ash grey; upper tail coverts, pale ash grey. Bill and [illegible], yellow.

The female is less than the male. Length, one foot one inch. Head, dusky, and neck greyish brown, with a patch of white behind the eye; [illegible]. Back on the upper part, greyish brown, on the lower part black. Greater and lesser wing coverts, light greyish brown; primaries, dark greyish brown; secondaries, white; tertiaries, dark greyish brown. Tail, ash grey. Bill and legs, bluish black.

The young male at first resembles the female.

I have arranged the above description from Yarrell's account.

# SMEW.

LOUGH DIVER. WHITE NUN.
WHITE MERGANSER. WHITE-HEADED GOOSANDER.
SMEW MERGANSER, RED-HEADED SMEW.

| | |
|---|---|
| *Mergus albellus,* | PENNANT. MONTAGU. |
| " *minutus,* | LINNÆUS. |
| " *Asiaticus,* | GMELIN. |
| *Merganser stellatus,* | BRISSON. |

*Mergus*—A Diver. *Albellus. Albus*—White.

THE Smew is an exceedingly elegant and handsome bird, though its plumage is plain, consisting only of the two primitive colours, so to call them.

It occurs in Iceland, Sweden, Russia, Holland, France, Germany, Switzerland, Greece; also in Asia, in Persia, Kamtschatka, and Siberia, Asia Minor, about the Caucasus, and in Japan. It is known, though only as a straggler, in America, in the Fur Countries, United States: it belongs to Greenland.

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In Yorkshire one was killed at Sutton-upon-Derwent, near York, in May, 1852, as the Rev. George Rudston Read, Rector of that place, has informed me; several have been shot near Doncaster in hard winters; a few near Leeds; one at Swillington, January 24th., 1838; also at Gledhow. Others near York, the males more rarely, the females and young less so. The same remark applies to Oxfordshire, and indeed no doubt everywhere else. In the month of January, 1838, however, three adult males were killed at one shot on the Isis, near the seat of the famous University, the foundation of the Great Alfred.

The Hon. T. L. Powys has met with the Smew on the River Nene, in Northants, near Stoke Doyle, on the 5th. of January, 1850. In January, 1849, as Arthur S. H. Lowe, Esq., of Highfield House, near Nottingham, has written me word, several were seen near there, and four were shot: only three had been known in the preceding thirty years. Three or four, G. Grantham, Esq. mentions to me as having been procured near Lewes, on the Sussex coast, one of them in February, 1855, between Cuckmere Haven and Seaford. In Hertfordshire one was shot near Watford. In Cambridgeshire the Smew has occurred near Ely on the 7th. of December, 1849. In Surrey, near Godalming.

In Cornwall this species is rare, and only occurs in severe winters. In Norfolk young birds are not uncommon near Yarmouth in hard winters: the adult bird is more rare. Specimens have also occurred at Gwyllyn Vase and Swanpool, near Falmouth—one on the 29th. of January, 1848. In the county of Northumberland Bewick mentions three females killed on the Tyne at one shot, in January, 1820, after a severe frost. In Cambridgeshire, Willughby mentions having had one from Cambridge, and the Rev. Dr. Thackeray has another, bought in the market there, in April, 1825.

The Smew has been observed in Sanday, Orkney, and is believed to breed in that part.

In Ireland it is an occasional winter visitant. It is a Scottish species likewise in the same manner.

They come to us in winter. Their movements are southwards in the autumn, and northwards in the spring.

They are shy and careful birds, and take wing with great readiness when apprehensive of danger. One has been kept on the water in St. James' Park, London.

They feed on small fish, crustacea, and water-insects.

They fly quickly, and are excellent divers, but walk in a laboured manner.

The nest of the Smew is made of dry grass, and lined with the down of the bird herself. It is placed on the ground, upon the banks of lakes and rivers, not far from the water, or in a hollow in a tree.

The eggs are said to be eight or ten, or from that to fourteen in number, and of a yellowish white colour.

Male; weight, a little over a pound and a half; length, one foot five inches, to one foot five and a half. Bill, bluish leaden grey colour, the tooth white—a black patch, with green reflections, extends from its base to and round the eye. Iris, reddish brown; head, white, except that from the crown another dark patch, tinged with green, descends down the back of the neck; it assumes the form of a crest, intermixed with some long white feathers: they are of a silky texture: neck, white, with the exception above named. Chin and throat, white; breast, white, but two half-moon-shaped streaks of black run forwards from the back in front of the wing, one of them for an inch and a half, the other about an inch farther back; the sides are barred with fine grey zigzag lines. Back, on the middle part, black.

Greater wing coverts, deep glossy black, tipped with white; lesser wing coverts, partly white. Primaries, dusky black; secondaries, deep glossy black, fringed narrowly and tipped with white, forming two small bands across the wing; tertiaries, leaden grey, the outer feathers the lightest coloured. Tail, greyish ash-colour, and wedge-shaped; upper tail coverts, greyish ash-colour; under tail coverts, white. Legs and toes, bluish grey; webs, bluish grey.

Like the Ducks, the male Smew assumes the plumage of the female in the beginning of June, and retains it till the autumnal moult, when he re-assumes his own costume.

The female is much less than the male. Weight, fifteen ounces: length, one foot two inches and a half, to one foot three or four; bill, bluish lead-colour—at its base is a black patch. Iris, reddish brown. Head and crown, reddish chesnut brown, which colour goes down the upper part of the neck; this colour is darkest between the bill and the eye, where the black patch exists in the male; the feathers on the crown and occiput are elongated, and on the last-named somewhat hackled. On the back of the neck and nape the dark streak running downward till it encircles the front, spreads out before and towards the back. The sides of the upper part of the neck white. Chin and throat, white; breast above, light greyish white, below white, the sides and flanks grey; back above, dark greyish brown; on the middle and lower part, greyish black.

Greater wing coverts, deep greyish black, tipped with white; lesser wing coverts, greyish white on the middle part. Primaries, dusky greyish black; secondaries, deep greyish black, bordered and tipped with white, but the cross bands thus formed are narrower than in the male: the last secondary is grey, having the outer web white, bordered with a tint of black; tertiaries, dark bluish grey. Tail, dark greyish brown; it consists of sixteen feathers; upper tail coverts, dark greyish brown. Legs and toes, bluish grey; webs, bluish grey.

The young male resembles the female till the second year, but the reddish brown on the head is clearer, and the feathers less elongated; the greater wing coverts and the secondaries are of a deeper black, and the white tips are conspicuous, the back too then becomes varied with black, and the two crescents begin to shew themselves.

The young female does not acquire the dark patch behind the bill till her second year. There is more of the red colour on the back of the neck. The lesser wing coverts are greyish white, and the breast is dull white.

# HOODED MERGANSER.

*Mergus cucullatus*, [illegible] [illegible] EYTON
[illegible] [illegible] GOULD. TEMMINCK.

*Mergus*—A Diver. *Cucullatus*—Hooded.

This is another very neat species. It belongs to North America, coming southwards from Hudson's Bay to the United States and Mexico, but has only occurred in Europe as a rare and occasional straggler. It has been observed in France. It is not unfrequent along the coast, but prefers inland waters and smaller creeks or ponds to those which are larger.

In this country one of these birds was obtained near Yarmouth, Norfolk, in the winter of 1829. One in Suffolk, one at Benton Park, the seat of Anthony Ralph Biddulph, Esq.; and one near Bangor, in Wales, in the winter of 1830-31.

Two specimens have been obtained in Ireland.

They arrive from the north in October, and go farther south according to the weather of the season. They make their retrograde movement from the beginning of March to the middle of May. They migrate in small flocks without any order.

The mother is very attentive to her young. The male deserts her as soon as she begins to sit. These birds [illegible] in small flocks of from five or six to ten. They are, [illegible] says, eaten by some persons, but the [illegible] of expression leads to the opinion that they do not [illegible] excellence [illegible] to [illegible]

They are extremely quick in flight, [illegible] and most expert divers.

They feed on small fish, tadpoles, and [illegible] bordered and tipped with white, but the cross bands thus formed are narrower than in the male; the last secondary is grey, having the outer web white, bordered with a tinge of black; tertiaries, dark tinted grey. Tail, dark greyish brown; it consists of sixteen feathers; upper tail coverts, dark greyish brown. Legs and toes, bluish grey; webs, bluish grey.

The young male resembles the female till the second year, but the reddish brown of the head is clearer, and the feathers less elongated; the greater wing coverts and the secondaries are of a greyer tinge, and the white tips are [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] with black, and the [illegible] [illegible] [illegible] themselves.

The young female has [illegible] [illegible] the dark patch behind the ear [illegible] [illegible] [illegible] there is more of the red [illegible] [illegible] [illegible] [illegible]. The lesser wing coverts are greyish white and the breast is dull white.

# HOODED MERGANSER.

| | |
|---|---|
| *Mergus cucullatus,* | SELBY. JENYNS EYTON |
| " *fuscus,* | LATHAM. GOULD. TEMMINCK. |

*Mergus*—A Diver. *Cucullatus*—Hooded.

THIS is another very neat species. It belongs to North America, coming southwards from Hudson's Bay to the United States and Mexico, but has only occurred in Europe as a rare and occasional straggler. It has been observed in France.

It is not unfrequent along the coast, but prefers inland waters and smaller creeks or ponds to those which are larger.

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Two specimens have been obtained in Ireland.

They arrive from the north in October, and go farther south according to the weather of the season. They make their retrograde movement from the beginning of March to the middle of May. They migrate in small flocks without any order.

The mother is very attentive to her young—the male leaving her as soon as she begins to sit. These birds generally go in small flocks of from five or six to ten. They are, Audubon says, eaten by some persons, but this qualified mode of expression leads to the opinion that they do not by their innate excellence contribute much to 'la haute cuisine.'

They are extremely quick in flight, active in their movements, and most expert divers.

They feed on snails, tadpoles, and insects.

The note is represented by the syllables 'croo, croo,' repeated more or less frequently. Both birds utter it.

The nest, placed in trees, or, when these are wanting, in holes and hollows, in either case by the margins of lakes and rivers, is formed of grass and other herbage, lined with feathers and down from the breast of the mother bird.

The eggs, eight or ten in number, and of a yellowish white colour, are laid in May, and hatched in June.

Male; length, one foot six or seven inches; bill, clear reddish brown, the tooth black; iris, golden yellow. The head on the crown is surmounted by a half-circular hood, from whence the name of the bird. It is spread out flat-wise or closed at pleasure. According to Wilson, the crest is composed of two separate rows of feathers, radiating from each side of the head, and easily separable. This hood, as well as the remainder of the head, is dusky black with purple and green reflections, with the exception of a large somewhat triangular-shaped patch or spot of pure white, bordered on the outside with black, behind the eye. This is more conspicuous when the crest is spread from about it. Neck, also dusky black, with metallic purple and green reflections. Breast, white, with two crescent-shaped streaks of greenish black, coming forwards on its upper part from the like colour on the back; the sides and flanks yellowish rust-colour, and finely pencilled with yellowish brown and black; back, deep dusky blackish brown.

Greater wing coverts, glossy greenish black, tipped with white, the bases also white; lesser wing coverts, deep brownish black. Primaries, deep brownish black. The secondaries deep brownish black, and having the outside borders white, are crossed with a bar of white, the bases also white; tertiaries, metallic greenish black, the shaft streaks white. Tail, brownish black. Legs and toes, clear reddish brown; webs, dusky.

The female is rather less in size. Length, not quite one foot and a half. The bill, which is slender, is clear reddish brown. Head on the crown, reddish brown, the feathers elongated at the occiput in a semicircular manner, verging into pale reddish brown; the remainder and the neck and nape, pale brown, the front of the neck paler, the edges of the feathers being lighter coloured. Chin, greyish white, speckled with pale brown; throat and breast above, brown, deeply margined with grey; below, white, the sides brown with paler edges to the feathers; back, brownish black.

The wings, when closed, only reach to within three inches of the end of the tail. The secondaries have the outside edges of the outer webs white, forming a small speculum. The tail consists of fourteen feathers, and is deep brown. Legs and toes, clear reddish brown.

The young at first resemble the female. The male obtains some white on the head in the second year, but is not complete in plumage till the third.

# RED-BREASTED MERGANSER.

### RED-BREASTED GOOSANDER. SAWBILL. HARLE.

| | |
|---|---|
| *Mergus serrator,* | PENNANT. MONTAGU. BEWICK. |
| " *cristatus,* | BRISSON. |
| " *niger,* | GMELIN. |
| *Merganser niger,* | BRISSON. |

*Mergus*—A Diver. *Serrator. Serra*—A saw.

THE Merganser is a common bird in Europe—in Norway, Sweden, Lapland, Iceland, and the Ferroe Islands, as also in Holland, Germany, Switzerland, France, and Italy. It likewise is found in Asia, in Siberia, about Lake Baikal, and along the courses of the larger rivers, and eastward to Japan. In America it belongs to Greenland, the Fur Countries, the shores of Hudson's Bay, and Newfoundland.

They frequent the coast, its bays and estuaries, and the lower parts of rivers, namely, where they disembogue themselves into the sea, but sometimes advance upwards, and reach inland waters, though seldom beyond the influence of the tide. They breed, however, on fresh-water lakes.

In Northumberland these birds occur along the coasts, Holy Island and the Fern Islands being favourite localities; also along the shores of Durham.

In Lincolnshire the Rev. William Waldo Cooper shot one in the Ancholme, in the winter of 1853-4. In Northamptonshire the species has occurred on the River Nene. In Suffolk one near Ipswich, as T. J. Wilkinson, Esq., of Walsham Hall, has written me word. In the adjoining county of Norfolk one, a male, an adult bird, was seen at Lowestoft, in the third week of July, 1852, as recorded by

J. H. Gurney, Esq., of Easton, in the "Zoologist," page 3808. In the usual way it is also seen in those parts in the winter months, but old males are seldom obtained except in severe seasons. Many specimens were procured along the coast of Essex and the two last-named counties in the winter of 1829-30. They are not uncommon near Yarmouth, and generally on the Norfolk coast in severe weather, but the immature birds are much more common than the adults.

In Yorkshire, a fine female specimen was shot near Richmond on the 12th. of December, 1851; a female shot at Barnsley, in January of the same year. Specimens have occurred near Hebden Bridge; also near Doncaster—one in 1837. Individuals also near York; and at Swillington, near Leeds—several were procured in the year 1838. In Cambridgeshire a pair were shot at Prickwillow, in 1834. A female in Burwell Fen, in summer; others have been sold in the Cambridge market. In the sister county of Oxford, a fine specimen of the bird was killed at Otmoor, in February, 1838, and in the winter of 1841, two others fell to the gun near Cassington. A pair, male and female, were shot near Reading, in 1795. Three were shot, adult birds, a male and two females, at Terrington Marsh, Norfolk, on the 7th. of December, 1859. In Essex, two on the Thames, near Barking, the beginning of January, 1838.

In Cornwall, one was shot near Penryn Creek, Falmouth, in December, 1846, and a second specimen in November, 1847; others on the Truro river and its branches. The species has occurred also in Kent, by the Thames; in Worcestershire, on the Severn, near Worcester; likewise in Lincolnshire, Dorsetshire, and Surrey, near Chertsey, in November, 1842. One was shot out of a flock of thirty-four.

In South Wales, Mr. Dillwyn has noticed its occurrence at Swansea. It has also been seen in North Wales. In Montgomeryshire three were seen at Buttington, on the River Severn, January 2nd., 1861, one of which was shot.

They also breed in Scotland, in Sutherlandshire, on all the lochs, as near Scourie and elsewhere; likewise in Argyleshire, on Loch Awe, where the nest was found by Sir William Jardine, Bart., and Mr. P. J. Selby, in June, 1834; as also at Loch Maree. They also remain throughout the year in Orkney, Shetland, and the Hebrides, and very many winter. Pennant has mentioned their breeding in the isle of Islay, and Mr. Macgillivray found the nest in Harris.

# RED-BREASTED MERGANSER.

RED-BREASTED GOOSANDER. SAWBILL. HARLE.

| | |
|---|---|
| *Mergus serrator,* | PENNANT, MONTAGU, BEWICK. |
| " *cristatus,* | BRISSON. |
| " *niger,* | GMELIN. |
| *Merganser niger,* | STEPHENS. |

*Mergus*—A Diver. *Serrator. Serra*—A saw.

THE Merganser is a common bird in Europe—in Norway, Sweden, Lapland, Iceland, and the Ferroe Islands; as also in Holland, Germany, Switzerland, France, and Italy. It likewise is found in Asia, in Siberia, about Lake Baikal, and along the courses of the larger rivers, and eastward to Japan. In America it belongs to Greenland, the Fur Countries, the shores of Hudson's Bay, and Newfoundland.

They frequent the coast, its bays and estuaries, and the lower parts of rivers, namely, where they disembogue themselves into the sea, but sometimes ascend upwards, and reach inland waters, though seldom beyond the influence of the tide. They breed, however, on fresh-water lakes.

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In Ireland specimens have been obtained in Meath and other parts. There also the birds are indigenous.

They come to us in winter, 'when the winds whistle cold' and even the hardiest sea-birds are glad to betake themselves to comparative shelter.

These birds are extremely shy and wary, especially during the breeding-season. They go in flocks. They too have the power of submerging the whole body in a gentle and imperceptible manner, the bill only being kept out.

They swim and dive with the greatest expertness, and are able, it is said, to remain two minutes under the water, making rapid progress beneath the surface. They can walk fast, but are ungraceful in their movements. They fly in a buoyant and easy manner.

Their food is chiefly made of small fish, but also of beetles and water insects and their larvæ, worms, and frogs.

The note sounds most like the words 'curr, curr.'

The places chosen by this species for nesting, are the vicinage of the sea, and the neighbourhood of lakes and rivers, among reeds and rushes.

Male; weight, two pounds; length, one foot nine or ten inches. The upper bill, which is closely serrated, is dark orange reddish brown, the edges brighter; the under bill red; the tooth, horn-colour; iris, red. The head, and crown, which has the feathers loose, webbed, and elongated, and the neck all round on the upper part, dark shining greenish black, changing in different lights from glossy violet black to a beautiful gilded green; down the back of the neck and the nape descends a narrow line of glossy black; the remainder of the neck all round is white. Chin and throat, dark glossy green, in winter the chin is yellowish white. Breast above, pale chesnut brown, streaked with black, the centres towards one side of the feathers being of that colour; in winter it is paler, and mixed with white at the edge; below the breast is white, and in front of the wings are several rounded feathers, edged broadly with rich velvet black. The sides of the breast are grey, pencilled with irregular bars of darker. Back on the upper part, glossy black, and the lower part deep greyish brown, undulated with white.

The wings are dark brown at the point; greater wing coverts, glossy black at the base, white at the ends; lesser wing coverts, white, deep brown near the shoulders; primaries, brownish black; secondaries, glossy black at the base, the remainder white; two conspicuous white bands are formed by these and the others across the wing; tertiaries, white, edged narrowly with glossy black. Tail, greyish black; it consists of sixteen feathers, the shafts of the feathers are very strong; upper tail coverts, white, with grey waved pencillings; under tail coverts, white. Legs and toes, bright reddish orange; webs, darker reddish brown.

The male in summer assumes temporarily the plumage of the female.

The female is rather less in size than the male. Length, about one foot nine inches; bill, dark orange reddish brown; iris, orange red. The head and crown, on which latter the feathers are darker, and at its back elongated, are reddish brown; neck behind and nape, also reddish brown; chin, paler brown, or greyish white. Throat and breast on the upper part, white, spotted with dusky, the centres of the feathers being of that hue, below the breast is white; the sides blackish grey, the edges of the feathers paler. Back, brown, or blackish grey, the edges of the feathers paler.

Greater wing coverts, dark brownish black, ended with white; lesser wing coverts, brown; primaries, dark brownish black; secondaries, dark brownish black, the ends white, forming with the tips of the greater coverts two white bands across the wing—a double speculum, as it were; tertiaries, white, but broadly edged with dark brownish black, and except on one or two the white is impure. Tail, brownish grey; upper tail coverts, brownish grey; under tail coverts, white. Legs and toes, dull orange reddish.

When first hatched the young are dark brown above, below white, the sides of the neck reddish.

The young male afterwards resembles the female, but is brighter coloured. The bill is pale red, the ridge of the upper mandible horn-colour, the head dark brown, the crest very short, the chin nearly white, but tinged with brown. The lower part of the neck grey, tipped with white; the back of the neck grey; breast, dull white, the flanks grey; back and lesser wing coverts, hoary grey; primaries, dark brown, the outer webs black; secondaries the same, except six, which are broadly tipped with white, forming the speculum, which, when closed, has a dark wedge-shaped mark across it. The wings underneath mottled with grey and white; under tail coverts, grey. Legs and toes, dull orange, the joints tinged with dusky; the webs dusky grey.

# GOOSANDER.

**DUN DIVER. SPARLING FOWL. SAWBILL. JACK-SAW.**

| | |
|---|---|
| *Mergus merganser,* | LINNÆUS. GMELIN. |
| " *castor,* | PENNANT. BEWICK. |

*Mergus*—A Diver. *Merganser*—A word of the 'composite order,' from *Mergus*—A Diver. *Anser*—A Goose.

THE Goosander is indigenous in Iceland, Finland, Lapland, Sweden, Denmark, Russia, and Norway; and likewise is known in Poland, Hungary, Greece, Italy, Prussia, Pomerania, France, Holland, Switzerland, and Germany.

It belongs to North America, extending from Hudson's Bay over the United States, also to Greenland.

In Asia it wanders from the Black Sea and the Caspian Sea, to Tartary, Siberia, and Japan.

In Yorkshire the Goosander has been met with occasionally, that is to say, in severe winters, in the neighbourhood of Halifax; also in the East Riding. In Oxfordshire it is often met with on the rivers during severe frosts, but seldom in milder weather.

One, a female, of which Mr. W. Brooks Gates has written me word, was shot at Weston Favell, near Northampton, the first week in February, 1855. One also in the same county, by the gamekeeper of Lord Lilford, in the beginning of 1850. It occurs but rarely on Croxby Lake, Lincolnshire, the Rev. R. P. Alington has informed me. It has been shot too at Burleigh, near Stamford. In Cornwall its occurrence is rare. One was obtained at Scilly, the end of December, 1853. Several have been killed at Penryn Creek, Falmouth.

In Shropshire one was shot near Shrewsbury, on the River Severn, by the gamekeeper of J. A. Loyd, Esq., the first week of January, 1850. In Nottinghamshire, on December 27th., 1854, a Goosander took up its abode on the Trent, and stayed some weeks. It was not shy, and when fired at with a gun nimbly dived below the surface of the stream, and reappeared after a few seconds. When observed unmolested, its manners were pleasing and amusing, as it swam leisurely on the water, preening and pruning its plumage, or occasionally dipping underneath. The Trent was partly covered with ice, and it would disappear near the edge of a large piece, and after diving under it perhaps for fifty yards, again come to the surface. Several individuals have been shot off the river.

These birds were very numerous along the coasts of Norfolk, Suffolk, and Essex, in the winter of 1829-30. They are of frequent occurrence, that is to say young birds, the old ones being only met with in very severe weather. One at Guyhirn Wash on the 7th. of December, 1848. They occur near Yarmouth occasionally, in hard winters. In the county of Durham a pair of Goosanders, male and female, were shot on the Tees, near Stockton, the middle of March, 1853. The former was found to have part of a gold earring in its stomach: what was its history? November 1st., 1854, one was shot near [illegible] Park, Lancashire. It has also occurred in Surrey, near Godalming; and likewise in Dorsetshire, Northumberland, Sussex, and Kent. These birds are now and then exposed for sale in the London markets.

It is not uncommon in the Hebrides, and breeds in those islands—North Uist, and others. The Rev. G. Low has mentioned also that it used to do so in Orkney. It seems to be now only a winter visitant there.

In Scotland it is not uncommon in the county of Sutherland.

In Ireland they are annual visitants at the same season.

These birds frequent the sea-coast, and the mouths of rivers, the course of which latter they follow up in quest of food; and also inland lakes.

The vernal migration of this species takes place in February or March; the autumnal in November; the former to, the latter from the north.

In the autumn and winter they assemble in small flocks of about six or eight. They are fond of keeping by themselves, but do not mix by choice with other waterfowl. The Rev. James Smith, of the Manse of Monquhitter, by Turriff, Aberdeenshire, writes the following particulars of this bird in the 'Zoologist,' pages 2295-6. 'While the male almost

# [illegible]

## [illegible] [illegible] [illegible] [illegible].

[illegible] [illegible]. [illegible] [illegible].
[illegible]. [illegible] [illegible].

[illegible] [illegible]. [illegible]—A word of the composite order.
[illegible] [illegible] [illegible]. [illegible]—A Genus.

[illegible] [illegible] is [illegible] in [illegible], Finland, Lapland, [illegible] Russia and Norway, and likewise is known in [illegible], Italy, [illegible], Pomerania, France, Holland, [illegible], and Germany.

It [illegible] in North America, extending from Hudson's Bay over the United States, and to Greenland.

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In Yorkshire the [illegible] has been met with occasionally, that is to say in severe winters, in the neighbourhood of [illegible], and [illegible]. In [illegible] it is often met with in the winter during severe frosts, but seldom in milder weather.

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In Ireland they are unusual visitants at the same season.

These birds frequent the sea-coast, and the mouths of rivers, the course of which latter they follow up in quest of food; and also inland lakes.

The vernal migration of this species takes place in February or March; the autumnal in November. The former to, the latter from the north.

In the autumn and winter they assemble in small flocks of about six or eight. They are sociable among themselves, but do not mix by choice with other water-fowl. The Rev. James Smith, of the Manse of Monquhitter, by Turriff, Aberdeenshire, writes the following particulars of this bird in the 'Zoologist,' pages 2295-6. 'While the male almost uniformly takes wing on your approach to the river, the female rarely or never does so, but with a hoarse and as it were suppressed kind of croaking, makes off for the opposite side, sunk deeply in the water, and hurrying rapidly down the stream. Should she be surprised unexpectedly, or pressed more hardly and perseveringly than usual, she finally dives, makes her way rapidly under the water, and emerges silently at a very considerable distance from the spot where she went down. The male, on the contrary, although he gets upon wing with apparent difficulty, moving at first like a stone skimming the surface of the water, ascends, nevertheless, to a great elevation in the air, describing a circle of extended diameter, and only alighting again after more evolutions than one, and when the danger is apparently over.' They are wild and wary birds.

On the land they are but ungainly in their movements, but can, nevertheless, proceed in a rapid manner, if occasion require. Swimming and diving are their most natural occupations, and these they perform with ease and grace. They swim low in the water. Meyer adds, 'when the Goosander dives in open water, it re-appears generally from fifty to sixty yards from the spot of its disappearance; but in places where there is only a small opening in the ice, it repeatedly comes up in the same place. The bird is said to remain frequently under water for two minutes, and it has been seen to walk about at the bottom in pursuit of food.' They fly with great ease, and in a rapid manner, and can proceed for a considerable distance.

They feed on fish and the smaller reptiles.

The call-note of the Goosander resembles the word 'carrr, carrr,' and the young utter a piping cry while yet unfledged.

The Goosander builds on small islands in fresh-water lochs in the neighbourhood of the sea, and near the water's edge.

The nest, which is placed under the cover of bushes, in long grass, among stones, or in the hollow of the stump of a decayed tree, is large altogether, being raised to a height of seven or eight inches, on a mass of dead weeds, but the inner and more finished part is only about seven inches and a half across, and four in depth. It is composed of dry grass and small roots, rather neatly twined together, and lined with the down of the bird.

The eggs, of a long and oval shape, are from four to six, seven, or eight, and, Yarrell says, ten or fourteen, in number, or more, though rarely; if removed from the nest, as many as thirty have been successively laid: their colour a uniform buff white or cream yellow.

The female has been seen to carry her young on her back, in the same way as described of the Swan. She leads them to the water as soon as they are hatched, or carries them thither in her bill if the nest has been built in the hollow of a tree, and at once commences their education.

The males appear to leave the females when the latter have begun to sit, and do not rejoin them till the summer is over: while absent they are only accompanied by one or two females, if any.

Male; weight, about four pounds; length, two feet two inches and a half to two feet three or four inches. The bill, which is long and rather slender, serrated on the sides, and hooked at the end, is bright red, the upper mandible edged with black, the tooth horn-colour; iris, carmine red. Crest, towards the back of the head, the feathers on the crown being long and loose, and neck on the upper part, behind, and nape, black, glossed with green; sides of the head, chin, and throat, dull black. When this bird is alive the breast on the upper part is tinged with a beautiful roseate hue; when this fades the colour remains of a rather pale, though decided buff salmon-colour; the remainder of the breast is white, but the sides on the extreme lower part are waved with grey and white. Back on the upper part, fine glossy black, on the lower part brownish grey.

The wings in breadth reach to three feet two inches; the upper border of the wing is black; greater wing coverts, grey, with some white, and tipped with rich buff orange; lesser wing coverts, white; primaries, dusky velvet black, with ash-colour on the inner webs of some of the inside ones; secondaries, white, bordered narrowly with greenish black on the outer webs; tertiaries, also white, bordered narrowly with dusky velvet black. The tail is dark bluish grey, the shafts dusky: it consists of eighteen feathers; upper tail coverts, brownish grey. The legs, which are placed far back, and the toes, rich orange; webs, darker orange red.

The female is not so large as the male. Bill, dull purple red on the sides, the remainder of both mandibles black, the edges finely serrated; iris, purple red. The crest is long and pendant. Head, crown, and neck on the upper part, ferruginous, or pale reddish brown, the former darker than the last named; the feathers at the back of the head are elongated. Nape, grey; chin and throat, white; breast on the upper part and sides, grey, the former tinged with yellowish buff, the edges of the feathers paler, and the latter undulated with pale brown. The lower part of the breast is white, with a tinge of buff. Back, deep bluish grey, with a tint of brown. Greater wing coverts, greyish white at the ends of some, or white; the lesser wing coverts have the lower row tipped with black, otherwise they are bluish grey; primaries, dusky black. Six of the secondaries are white at the ends, forming the speculum; tertiaries, grey. Tail, grey; upper tail coverts, grey; under tail coverts, white. Legs and toes, reddish orange.

The young resemble the female till after the first moult. The blackish green feathers on the head and upper part of the neck are the first distinguishing marks that are acquired. The full plumage is not attained till the second year.

the bar across the feathers at the base of the head are obscured. Nape, grey; chin and throat white; breast on the upper part and sides, grey, the former tinged with yellowish buff, the edges of the feathers paler and the latter [illegible] with pale brown. The lower part of the breast is white with a tinge of buff. Back, deep bluish grey, with a tint of brown. Greater wing coverts, greyish white [illegible] of some, or mostly, the lesser wing coverts have the [illegible] row tipped with black, otherwise they are bluish grey, [illegible] dusky brown. [illegible] of the secondaries are white [illegible] the tertiaries, brownish grey. Tail grey; upper tail coverts grey; under tail coverts, white. Legs and feet, reddish orange.

The young resemble the [illegible] after the first moult. The blackish green [illegible] on the head and upper part of the neck are the first distinguishing marks that are acquired. The full plumage is not attained till the second year.

# GREAT CRESTED GREBE.

### TIPPET GREBE. CARGOOSE. LOON.

| | |
|---|---|
| *Colymbus cristatus,* | LINNÆUS. |
| *Podiceps cristatus,* | PENNANT. MONTAGU. |

*Colymbus*—A Diver. *Cristatus*—Crested.

THE Great Crested Grebe is very plentiful in Holland and Germany, and belongs also to Iceland, Sweden and Norway, Italy, France, and Russia. In Asia it has been observed about the Caucasus and in Siberia, Asia Minor, and Japan. Also in Africa, both north and south. It belongs likewise to North America, advancing southwards from the Fur Countries, as far as Mexico, through the States.

This singular-looking bird is indigenous in many parts of the country, videlicet, in Lincolnshire, Norfolk, Shropshire, and Wales. Its occurrence has been noticed in Cumberland. In Yorkshire, one was procured near Doncaster, the beginning of 1837. They are sometimes obtained in Oxfordshire, in the neighbourhood of Weston-on-the-Green. One in Berkshire, near Hungerford, in February, 1808. In Hampshire, one was seen on the Southampton Water, the end of March, 1849. In Surrey one, a young bird, was captured near Reigate, on the 28th. of February, 1849. An adult male was shot in the month of June, on the Lincolnshire fens, Mr. William Felkin, Junior, of Carrington, near Nottingham, has informed me. It has occurred also on Croxby Lake. In Sussex, three near Battel, one of them the beginning of March, 1848. In Northamptonshire, one was shot on the 27th. of January, 1855, on the River Nene, as I am informed by the Hon. T. L. Powys; he adds, that it has also occurred at Blatherwycke Park, the seat of Augustus Stafford, Esq., M.P. In Norfolk four were shot near Yarmouth, on the 14th. of April, 1851; they are common on the Broads, and breed there: twenty-nine were collected in the same county, in the months of April and May, 1851, by Richard Strangwayes, Esq.; one at Diss Mere, the end of July, 1834. One of these birds, a male, was shot in February, 1850, at Blyth, in Northumberland. One on the 27th. of November, 1852, near Henley-upon-Thames, in Oxfordshire. In Cornwall, they are not uncommon off the coast in winter; also in Devon.

In Wales, Mr. Dillwyn has noticed this species in Glamorganshire.

In Scotland, it is considered rather a rare winter visitor. They breed in the Hebrides.

In Ireland, it is a perennial resident on the larger lakes, but is only occasionally seen.

Their haunts are lakes, ponds, rivers, and creeks of the sea, if these indeed are bordered with reeds and other such covert. In winter frost and ice send them down to the mouths of rivers and the coast.

Towards evening this species becomes active and lively, having previously been disposed to float about quietly, with the head drawn back on the plumage.

They migrate in small and large flocks of from seven or eight to fifty or more, during the night, taking advantage of warm weather. When 'Gaffer Winter' is creeping on, they pass to the south, and in March return in pairs to their intended breeding-places.

The skin of the breast of this Grebe has become a fashionable substitute for fur, and several were exhibited accordingly in the Great Exhibition of 1851. They appear to go in small numbers of eight or nine in the water. One of these birds has been kept on the water in St. James' Park, London.

These birds can fly well, and to a distance of a couple of miles or more; but during the time that they are engaged with their nest, they resort exclusively to diving, in which they are perfect adepts, for security, raising the head only above water to breathe, after a stretch of a couple of hundred yards. They do not excel in walking or running, but swim admirably, and dive with remarkable quickness: they float low. The female, 'if disturbed from her charge, seldom rises within gunshot, and if a boat be stationed to intercept her, will tack about and alter her course under water, without rising to breathe.'

Their food, procured by diving, is made up of small fish and young fry, crustacea, water-insects and their larvæ, small frogs, tadpoles, and parts of plants; and 'it is a remarkable fact that the specimens obtained of this species, invariably prove to have feathers in their stomachs, from the breast of the bird itself.'

The note sounds like the words 'cuck, cuck, cuck,' and 'craærr, craærr.'

The Loon breeds in fresh water, and makes its nest, such as it is, early in the year—in the month of April. It is a very large and careless mass of weeds, flags, and other water-plants, partly sunk under, and partly raised above the water, the top being slightly hollowed. The general width is about a foot or a little over, the height about half as much.

The eggs are three or four, and occasionally five. Four appears to be the usual average number, but one of them is generally addled. They are concealed by fragments of rushes placed over them, and if these be removed others are added. Their colour is white or greenish white.

Yarrell says, 'The parent birds are very careful of their young, taking them down with them for security under their wings when they dive.' According to Meyer, the birds pair for life, and haunt the same nesting-place year after year, both assisting in the work of nidification. The young swim about as soon as hatched.

If the nest or eggs be taken, the bird continues laying over and over again.

Male; weight, about two pounds and a half; length, one foot nine inches to one foot ten; bill, dusky along the top, the base vermilion red, the tip pale horn-colour; between the bill and the eye is a bare red space, that is to say, in the breeding-season, for afterwards it fades to a dusky colour. Iris, bright but pale crimson or pink red; over the eye is a white streak. Forehead and crown, greyish brown; the crest of this bird, which is long and silky, is erectible at pleasure, but ordinarily stands out backward like two long ears; it is as the head, the sides of which shade into yellowish red and white, and a ruff round the neck, displayed at pleasure, bright ferruginous, edged below with glossy greyish black, often with purple and green reflections; the back of the head and the neck next to the ruff are of a chesnut red and brownish black colour; nape, dusky brown tinged with grey, and often glossed with green and purple. Chin, throat, and breast above, orange buff of a paler or richer tint, which fades after death; below, silvery white, the sides dashed with brown and chesnut. Back, dusky grey, with here and there green and purple reflections.

The wings expand to the width of two feet six inches; lesser wing coverts, dusky brown; primaries, dull black; secondaries, white, forming an oblique bar across the wing when closed, but most visible when the wings are extended; tertiaries, buff orange, of a paler or deeper hue: they have on their outer webs a narrow black edge. Tail, short, and dusky greyish brown. The legs are deep greyish green on the front, and behind pale yellowish green, the scales forming a double ridge. The full plumage and crest are not acquired until the end of the third year.

In the female, which is not so large as the male, the bill is dull vermilion at the base; the crest is a little smaller. Head on the back, the feathers being long, loose, and somewhat hackled, crown, and neck, reddish brown; chin and throat, white; breast, yellowish white above, grey on the sides, below yellowish white, but sometimes tending to orange buff. The greater wing coverts are broadly tipped with white; primaries, greyish black; secondaries, partly white, exhibiting a speculum of that colour; tertiaries, deep greyish black; the shafts black. Legs and toes, dull reddish orange.

The young are at first clothed in reddish brown and greyish white down. Mr. Yarrell says 'For some time after they are hatched, the young chicks have their bills mottled black and white; the head and neck ornamented with long dark stripes on a ground colour of dull greyish white; the upper surface of the body dark brown, with longitudinal stripes of light brown; the whole under surface white.'

In the immature plumage, the eye is yellow; there is but little crest under two years; the forehead is white, and on the front of the head and the neck are numerous dusky zigzag lines; the red about the head is wanting, and there is a dusky streak in front of and under the eye; the sides are dashed with yellowish brown.

## RED-NECKED GREBE.

| | |
|---|---|
| *Colymbus rubricollis,* | GMELIN. |
| " *subcristatus,* | GMELIN. |
| *Podiceps rubricollis,* | LATHAM. |

*Colymbus*—A Diver. *Rubricollis.* *Ruber*—Red. *Collis*—The neck.

THE Red-necked Grebe is common in Sweden and Denmark, Holland, France, Switzerland, and Italy, as also in Germany, and the eastern countries of Europe. In Asia, it appears to be found in Japan and Persia.

In North America it was noticed by the lamented Sir John Franklin, during his expedition, and Audubon relates that it occurs in the Bay of Fundy, and in different parts of the United States.

It is for the most part a sea bird, but occurs also frequently on lakes, ponds, and rivers, and in these latter it nidificates, as mentioned hereafter.

In Yorkshire one was obtained in full plumage, in September, 1832, off Bridlington Quay, by Mr. H. C. Weaver, of Newark, who records another killed on the banks of the Trent, about two miles above Newark, Nottinghamshire. Another was obtained on the Trent between Burton and Stapenhill, in April, 1849. In Devonshire, five specimens occurred at Slapton Ley, early in the year 1809. In the same county a fine one was killed near Barnstaple in February, 1830. And one at Teignmouth in January. I have a specimen in my collection which, many years ago, 'once upon a time' I am sorry to say, was shot off the coast of the adjoining county of Dorset, near the village of Charmouth. It is also an uncommon species along the Northumberland coast, the Fern Islands, and other parts; also on that of Durham. In Gloucestershire one, also a young bird, has occurred, in January, 1850. In Surrey, near Godalming.

In Norfolk three were shot at Yarmouth in January, above, orange-buff of a paler or richer tint, which fades after death; below, glossy white, the sides dashed with brown and chestnut. Back, dusky grey, with here and there green and purple reflections.

The wings extend to the width of two feet six inches; lesser wing coverts, dusky brown; primaries, dull black; secondaries, white, forming an oblique bar across the wing when closed, but great patches when the wings are extended; tertiaries, buff orange, of a paler or deeper hue; they have on their outer webs a narrow black edge. Tail, short, and dusky greyish brown. The legs are deep greyish green on the front, and behind pale yellowish green, the scales forming a double ridge. The full plumage and crest are not acquired until the end of the third year.

In the female, which is not so large as the male, the bill is dull vermilion at the base, the nail black; the crest is a little smaller. Head on the back, the feathers being long, loose, and somewhat divided; crown and neck, reddish brown; chin and throat, white; breast, yellowish white above, grey on the sides, below yellowish white, but sometimes tending to orange buff. The greater wing coverts are broadly tipped with white; primaries, greyish black; secondaries, partly white, exhibiting a speculum of that colour; tertiaries, deep greyish black, the shafts black. Legs and toes, dull reddish orange.

The young are at first clothed in reddish brown and greyish white down. Mr. Yarrell says 'For some time after they are hatched, the young chicks have their bills mottled black and white; the head and neck ornamented with long dark stripes on a ground colour of dull greyish white; the upper surface of the body dark brown, with longitudinal stripes of light brown; the whole under surface white.'

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*Colymbus*—A Diver. *Rubricollis. Ruber*—Red. *Collis*—The neck.

THE Red-necked Grebe is common in Sweden and Denmark, Holland, France, Switzerland, and Italy; as also in Germany, and the eastern countries of Europe. In Asia, it appears to be found in Japan and Persia.

In North America it was noticed by the lamented Sir John Franklin, during his expedition in 1822; and Audubon relates that it occurs in the Bay of Fundy, and in different parts of the United States.

It is for the most part a sea bird, but occurs also frequently on lakes, ponds, and rivers, and in these latter it nidificates, as mentioned hereafter.

In Yorkshire one was obtained in full plumage, in September, 1852, off Bridlington Quay, by Mr. H. C. Weaver, of Newark, who records another killed on the banks of the Trent, about two miles above Newark, Nottinghamshire. Another was obtained on the Trent between Burton and Stapenhill, in April, 1849. In Devonshire, five specimens occurred at Slapton Ley, early in the year 1809. In the same county a fine one was killed near Barnstaple, in February, 1850. And one at Teignmouth in January. I have a specimen in my collection which, many years ago, 'once upon a time' I am sorry to say, was shot off the coast of the adjoining county of Dorest, near the village of Charmouth. It is not an uncommon species along the Northumbrian coast, by the Fern Islands, and other parts; also on that of Durham. In Gloucestershire one, also a young bird, near Bibury, in January, 1850. In Surrey, near Godalming.

In Norfolk three were shot at Yarmouth, in January, 1828, but they are deemed very rare. It is, however, a regular visitant in early spring, and late in the autumn, and it occasionally happens that a pair of these birds remain and breed in the county. One occurred at Surlingham, on the 26th. of January, 1848. One, in breeding plumage, near Yarmouth, the beginning of April, 1848; and one shortly afterwards at Skottow. In Kent, two were procured in April, 1786; and one, in after years, at Sandwich, in October. In Essex, this species has occurred at Saffron Walden. In Cornwall, a specimen was procured near Penzance, in the beginning of April, 1850. One previously in Falmouth harbour, and one at Looe. In Cumberland, one was shot near Ulverston, towards the end of February, 1838. In Oxfordshire, one near Henley-upon-Thames, in the winter of 1850. One in Derbyshire, on the Derwent, near Derby, in the beginning of 1844. In the county of Buckingham a fine specimen of this bird, in winter plumage, was shot at Sanderton, near Risborough, on the 10th. of October, 1848. In Berkshire, a Red-necked Grebe was killed at Burghfield, in May, 1792. In Kent, one in Stangate Creek, near the mouth of the Medway, the 6th. of February, 1849.

It is a common species in Scotland, on the Frith of Forth.

In Orkney this Grebe is not uncommon in the winter. It has been observed so early as the 26th. of September.

In Ireland it is considered extremely rare; has been met with in the county of Dublin, and also at Belfast and other places.

They appear not to be shy, until compelled by frequent alarms for their safety to become so.

They can fly well, but are only able to accomplish 'plain sailing,' owing to the shortness of their wings. In swimming and diving they are perfect adepts, and if pursued, merely raise the bill above the surface for respiration. It is asserted that in diving they do not use their wings, thus threading their way better through the masses of weeds.

They feed on small fish, insects and their larvæ, and appear, like the other species, to swallow feathers plucked from themselves.

The note is a mere 'cack, cack,' varied at times in their hours of pastime, into a sort of gabble. They appear, however, to be fond of making the most of it, at least in the way of quantity.

The nest is made among reeds, flags, and rushes, on the borders of fresh-water lakes and ponds, and is composed of the said materials. It is placed upon the water, and attached to the growing vegetation.

The eggs of the Red-necked Grebe are either white, or white with a slight tinge of blue or green, clouded, Selby says, with deep brown. They are four or five in number.

Several pairs of these birds breed in the same locality.

The male and female both assist in the construction of the nest, and shew much affection for their charge. The young take to the water as soon as they are hatched.

Male; weight, from about eighteen or nineteen ounces, to twenty-three; length, one foot four and a half, or from that to one foot five inches and a half or one foot six inches. Bill, dusky black, or dark horn-colour, except about the base, which is reddish yellow, and the under side of the lower mandible is of the latter colour; in winter the red becomes pale yellow. Iris, fine orange red. The crest, which is short, the feathers being a little lengthened on each side of the upper part of the head, and capable of being extended or not at pleasure, the forehead and crown, rich blackish brown, in winter tinged with grey; the sides of the lower part of the head greyish white. Neck on the back, and nape, dark greyish black; the sides and front of the neck, rusty yellowish red; chin and throat, white, or greyish white. Breast on the upper part, and below, silvery greyish white, turning to brownish grey, with some dusky streaks on the sides. Back, dark greyish or blackish brown; the tips of the feathers being greyish brown, the remainder blackish brown.

The wings are very short; greater and lesser wing coverts, dusky blackish brown; primaries, dark, nearly black towards the tips, the remainder dark tawny brown; secondaries, mostly white, and some with more or less black on the outer webs, one or two of the first, that is, towards the outside of the wing, have the tips only white, gradually increasing on each; tertiaries, dusky blackish brown. Under tail coverts, greyish brown. The legs are broad and flat, edgeways towards the front. They are greenish black on the outer part, and on the inner dull yellowish green; toes, the same; lobes, dusky on the outside.

Female; bill at the base, dull yellow. Crown, neck on the back, and nape, dusky; throat, white. Breast above, pale reddish rust-colour, mixed with some dusky; below, dusky white. Back, dusky.

The young have the head and neck dusky brown, the chin and throat greyish white; the back paler than in the adult.

# DUSKY GREBE.

SCLAVONIAN GREBE. HORNED GREBE.
HORNED DABCHICK. BLACK AND WHITE DABCHICK.

| | |
|---|---|
| *Colymbus obscurus,* | GMELIN. |
| " *Caspicus,* | GMELIN. |
| " *cornutus,* | GMELIN. |
| *Podiceps cornutus,* | LATHAM. |
| " *obscurus,* | LATHAM. |
| " *Caspicus,* | LATHAM. |

*Colymbus*—A Diver. *Cornutus*—Horned. *Cornu*—A horn

THIS Grebe is found in Europe in Iceland, and occurs in France, Germany, Holland, Switzerland, and Italy. In Sweden it breeds, as also in Sclavonia, whence one of its names. In America it ranges from Hudson's Bay and the Fur Countries, Canada, and the United States, to Florida, and is a generally distributed species. It is found likewise in the northern parts of Asia, and about the Caspian Sea.

The places that it frequents are both the sea-coast and its inlets, lakes, and large ponds.

A fine immature specimen of the Sclavonian Grebe was found on the 22nd. of October, 1853, in a disabled state by the side of the railway near Stockton-on-Tees, having evidently flown against the telegraph wires, as many other birds have at different times done, the result being a fatal 'shock to the system,' the 'electric wire' being at one and the same time a 'conductor' thereof, and a 'non-conductor' to them.

One of these birds, of which W. Brooks Gates, Esq. has given me an account, was taken in the parish of Weston Favell, near Northampton, in January, 1855. Another, a young bird, at Piddinghoe, in Sussex, the end of January, 1850. One also in Lancashire, on a reservoir at Ranwick. In Oxfordshire, several have been killed near Oxford, in the winter months; some also, though very rarely, during summer. In the county of Durham, one was shot on the Tees, near Stockton, on the 12th. of November, 1832. The young bird is not uncommon on Breydon, near Yarmouth, Norfolk, in the winter, being a regular visitant to that county; an adult was met with in May, 1830. In Lincolnshire, Mr. Allington records it as occurring on Crosby Lake; it has also been procured elsewhere. In Cornwall, one was killed near Truro, May 9th., 1788. Also in Devonshire.

In Sutherlandshire this Grebe is a permanent resident, and throughout the whole of Scotland, for it occurs all the way to the Border. It is in the winter that it is usually observed. Sir William Jardine has frequently shot the species on the Annan, in Dumfriesshire.

In Orkney it is, though in small numbers, a constant visitant. It was formerly common about the Loch of Aikerness, and is still occasionally seen about the Loch of Stenness. It is more frequently observed in the immature state than in the adult plumage. It belongs also to Shetland.

In Ireland, a few individuals have occurred in the counties of Meath and Kildare.

In Wales, Mr. Dillwyn has noticed the occurrence of a specimen at Penrice, near Swansea; it was shot by C. R. M. Talbot, Esq., M.P.

The annual migration of this species takes place in April and May for the north, and in October and November for the south: it is conducted by night. The birds go in flocks of thirty together.

Meyer says, 'It is a remarkable fact in the character of this species, that it generally swims about near the shore, and scarcely ever dives on the approach of danger until it has become imminent.' It certainly appears not to be so shy or alarmed at danger as the common species, but as soon as danger is apprehended the bird is down in an instant. More than three or four are seldom seen together. The male and female exhibit much conjugal affection.

It seems that these and other Grebes, when they have young, dive with them sheltered under their wings. They go for a great distance when alarmed, beneath the water, and it is said take some time in emerging at the surface.

# DUSKY GREBE.

SCLAVONIAN GREBE. HORNED GREBE.
HORNED DABCHICK. BLACK AND WHITE DABCHICK.

*Colymbus obscurus*, GMELIN.
" *Caspicus*, GMELIN.
" *cornutus*, GMELIN.
*Podiceps obscurus*, LATHAM.
" *cornutus*, LATHAM.
" *Caspicus*, LATHAM.

*Colymbus*.—A Diver. *Obscurus*—Dusky. *Pes*—A foot.

THIS Grebe is found in Europe in Iceland, and occurs in France, Germany, Holland, Switzerland, and Italy. In Sweden it breeds, as also in [illegible], without [illegible] of its range. In America it ranges from Hudson's Bay and the Fur Countries, Canada, and the United States, to Florida, and is a generally distributed species. It is found likewise in the northern parts of Asia, and about the Caspian Sea.

The places that it frequents are both the sea-coast and the inland lakes, and large ponds.

A fine immature specimen of the Sclavonian Grebe was found on the 22nd. of October, 1852, in a disabled state by the side of the railway near Stockton-on-Tees, having evidently flown against the telegraph wires, as many other birds have at different times done, the result being a fatal shock to the system; the 'electric' wire being at one and the same time a 'conductor' thereof, and a 'non-conductor' to them.

One of these birds, of which W. Brooke Gates, Esq. has given me an account, was taken in the parish of Weston Favell, near Northampton, in January, [illegible]. Another, a young bird, at Piddinghoe, in Sussex, the end of January, 1850. One also in Lancashire, on a reservoir at Beswick. In Oxfordshire, several have been killed near Oxford, in the winter months; some also, though very rarely, during summer. In the county of Durham, one was shot on the Tees, near Stockton, on the 13th. of November, 1852. The young bird is not uncommon on Breydon, near Yarmouth, Norfolk, in the winter, being a regular visitant to that county; an adult was met with in May, 1826. In Lincolnshire, Mr. Alington records it as occurring on Croxby Lake; it has also been procured elsewhere. In Cornwall, one was killed near Truro, May 4th., 1796. Also in Devonshire.

In Sutherlandshire this Grebe is a permanent resident, and throughout the whole of Scotland, for it occurs all the way to the Border; it is in the winter that it is usually observed. Sir William Jardine has frequently shot the species on the Annan, in Dumfriesshire.

In Orkney, it is, though in small numbers, a constant inhabitant. It was formerly common about the Loch of Aikerness, and is still occasionally seen about the Loch of Stenness. It is more frequently observed in the immature state than in the adult plumage. It belongs also to Shetland.

In Ireland, a few individuals have occurred in the counties of Meath and Kildare.

In Wales, Mr. Dillwyn has noticed the occurrence of a specimen at Penrice, near Swansea; it was shot by C. R. M. Talbot, Esq., M.P.

The annual migration of this species takes place in April and May for the north, and in October and November for the south: it is conducted by night. The birds go in flocks of thirty together.

Meyer says, 'It is a remarkable fact in the character of this species, that it generally swims about near the shore, and scarcely ever dives on the approach of danger until it has become imminent.' It certainly appears not to be so shy or alarmed at danger as the common species, but as soon as danger is apprehended the bird is down in an instant. More than three or four are seldom seen together. The male and female exhibit much conjugal affection.

It seems that these and other Grebes, when they have young, dive with them sheltered under their wings. They go to a great distance, when alarmed, beneath the water, and it is said take wing on emerging to the surface.

These birds feed on shell-fish, crustacea, insects, and parts of plants, procured by diving. They also appear to swallow some of their own feathers at times.

The nest of this species is large—a mass of reeds, sedge, and other water-plants, placed by the edge of the liquid element, or floated on the surface among the rushes or other such vegetation that there has its natural growth.

The eggs appear to be from two to four or five in number. They are of a white colour, with a faint tinge of blue.

Male; length, one foot one inch and a half; the base of the under mandible is pale yellowish pink, the tip, greyish, the remainder black; the space between the bill and the eye is rich yellowish chesnut red, or orange buff-colour, and this bar goes behind the eye, growing gradually broader; iris, yellow in the centre, surrounded with bright crimson red, the pupil bordered with white; the eyelids and the feathers round the eye and those that compose the double-horned tuft on the back of the head are of a bright orange buff-colour; the tufts are somewhat erectible, and stand out like two ears. The forehead, dull ferruginous; the crown, the ruff that surrounds the head, its sides, and the upper part of the neck, are dusky black, with a reflection of purple or green; in winter dark brown; neck in front and on the sides, bright ferruginous orange chesnut; on the back part and the nape, dusky, or blackish grey dashed with ferruginous, the feathers having paler margins. Chin and throat, dusky black, with purple and green reflections, and a little mottled with white, in winter white; breast on the upper part, bright ferruginous orange chesnut, darker on the lower part; below silky white, the sides intermixed with dusky and orange ferruginous; in winter the breast on the upper part is greyish white. Back, blackish grey, the edges of the feathers being paler than the remainder; in winter it is dark greyish brown.

The wings extend to the width of one foot ten inches; greater and lesser wing coverts, dark brown; the primaries are dark brown; the secondaries are tipped with white, forming a conspicuous bar across the wing when opened; the tertiaries are in winter greyish brown. Under tail coverts, white. Legs and toes, blackish grey on the outer part, and pale yellowish or greyish brown tinged with pale yellowish grey on the inner.

In the autumn, from the base of the bill a stripe of chesnut-tipped feathers goes over the eyes to the back of the head;

places in the county. One at Sutton the end of April, 1849. In Durham one near the lighthouse, by the Tees' mouth, 12th. of April, 1846. A pair of these birds were shot on a pond by Peperharow Park, near Godalming, Surrey. In Oxfordshire a fine male specimen was shot on Port Meadow, near Oxford, the end of April, 1843. In the month of June, 1847, a specimen was captured on the Isis near Sandford in full summer plumage. The bird has been procured near London, one at Hampstead, and two near Kingsbury, Middlesex, in 1841. One at Duxford; also in Dorsetshire and Sussex. Others have occurred in the winter months.

In Orkney this Grebe is stated by Mr. Clouston to be not rare. One was shot near Kirkwall in October, 1852, by J. H. Baikie, Esq.

In Scotland a few specimens have occurred. Robert Gray, Esq., of Glasgow, has sent me notice of one met with at Dunbar.

In Ireland it is extremely rare, but has occurred in the county of Dublin.

They dive to perfection, and are equally 'au fait' at swimming.

They feed on water-insects and their larvæ, tadpoles, young frogs, and water-plants, obtained principally by diving.

The bird before us builds its nest of and among reeds and rushes, and places it by the edge of a pond.

The eggs are of a pure white colour, sometimes with and sometimes without a tinge of blue; the surface is rough. They are of a regular oval shape, widest in the middle, and tapering towards each end. Their number, three or four, or, Selby says, four or five.

Incubation is said by Meyer to last three weeks.

Male; weight, nineteen ounces; length, one foot to one foot and one inch. The form of the bill readily distinguishes this species. It is gradually bent upwards to the tip which is slightly reflected. The under bill reddish at the base, the tip, and the whole of the upper bill, black; the tip is slightly bent; the base flattened. Iris, rich deep orange red, the eyelids edged with the same colour; behind the eye is a triangular-shaped patch, presently described; forehead, sooty black. The head on the sides has two tufts of long narrow feathers of pale yellow or buff, passing into deep orange chesnut. Crown, neck on the back, and nape, shining black; chin, speckled with grey; throat, deep shining greyish black. Breast, silky white, the sides shaded with dusky and deep chesnut red. Back, dark brown.

The wings measure one foot ten inches across when extended. The secondaries are tipped with white, most visible when the wing is open. The legs are in front dusky greenish, and behind greenish ash-colour.

The female, generally speaking, resembles the male.

# DABCHICK.

DOBCHICK. LITTLE GREBE. BLACK-CHINNED GREBE.
DIDAPPER. DUCKER. [illegible] SMALL DOUCKER. LOON.

*Colymbus fluviatilis,* — PENNANT.
*Podiceps minor,* — FLEMING. MONTAGU.
" *[illegible],* — [illegible]. BEWICK.

[illegible] — A Diver. [illegible] — Belonging to the Rivers.

This small species is [illegible] in Europe, in Switzerland, [illegible] found in France, [illegible], and Germany.

It is noticed also at the Cape of Good Hope, and in other parts of South Africa. In Asia it appears to exist likewise in the same latitudes.

The Dabchick is very generally distributed over the British Islands, and though more commonly seen perhaps in winter than in summer, appears both in the extreme north and the farthest south at all seasons.

Its natural home is the water, both the open lake and the village pond, the gently flowing river and the still pool, the narrow streamlet and at times the edge of the [illegible]. In winter, when the frost has shut the door of its accustomed [illegible], it betakes itself to the salt water, [illegible], and is then to be found in bays and [illegible].

In the 'Zoologist,' page [illegible], [illegible] Fisher, Esqs., relate that [illegible] of the Little Grebe were taken about the [illegible] in the [illegible] of Norwich, and [illegible], who was passing along [illegible] street, was [illegible] by a bird [illegible] striking against [illegible] near a [illegible], which was [illegible]

Bill, chin, speckled with grey; throat, deep shining purplish black. Breast, silky white, the sides shaded with dusky and deep chestnut red. Back, dark brown.

The wings measure one foot ten inches across when extended. The secondaries are tipped with white, most visible when the wing is open. The legs are in front dusky greenish, and behind greenish ash-colour.

The female, generally speaking, resembles the male.

# DABCHICK.

DOBCHICK. LITTLE GREBE. BLACK-CHINNED GREBE.
DIDAPPER. DUCKER. DIPPER. SMALL DOUCKER. LOON.

| | |
|---|---|
| *Colymbus Hebridicus,* | GMELIN. |
| *Podiceps minor,* | PENNANT. MONTAGU. |
| " *Hebridicus,* | MONTAGU. BEWICK. |

*Colymbus*—A Diver. *Hebridicus*—Belonging to the Hebrides.

THIS small species is common in Europe, in Switzerland, and is found in France, Italy, Holland, and Germany.

It is noticed also at the Cape of Good Hope, and in other parts of South Africa. In Asia it appears to exist likewise in the same latitudes.

The Dabchick is very generally distributed over the British Islands, and though more commonly seen perhaps in winter than in summer, appears both in the extreme north and the farthest south at all seasons.

Its natural home is the water, both the open lake and the village pond, the gently flowing river and the still pool, the narrow streamlet and at times the edge of the open sea. In winter, when the frost has shut the door of its natural larder, it betakes itself to the salt water, if within reach, and is then to be found in bays and sea-side pools.

In the 'Zoologist,' page 1601, J. H. Gurney and W. R. Fisher, Esqrs., relate that more than one specimen of the Little Grebe were taken about the 14th. of December, 1846, in the streets of Norwich; and on the 23rd., a gentleman, who was passing about eleven o'clock at night along the street, was surprised by a bird of this species suddenly striking against the wall near a gas-lamp, which was above him, and immediately afterwards falling upon his head. In Norfolk they are not uncommon at Yarmouth and elsewhere; also in Lincolnshire. In Nottinghamshire they occur on the Trent. In Cornwall they are plentiful on Swanpool, near Falmouth.

In Scotland the species is equally common as in England, in Sutherlandshire, Dumfriesshire, and other parts, and is commonly met with in the Frith of Forth; likewise in Shetland and Orkney. So also in Ireland it is indigenous.

In some parts of the country the Dabchick disappears, so it is said, in winter. In Yorkshire it is constantly seen at that season, as well as in summer, except indeed when its usual places of haunt are frozen up, and then, as a matter of course, it is obliged to quit them for a time. In frosty weather they are compelled from the larger pieces of standing water to the running stream.

This Grebe is naturally shy, but becomes accustomed to the sight of passers by the water that it inhabits, and its quick movements in diving may be watched not far off with little disturbance of its proceedings. They occasionally enter the sea close to the shore in those places where their accumstomed haunts are adjacent to it.

The Dabchick, like some other birds previously mentioned, has the power of sinking its body under the water, the head only and tail being kept out, and of then submerging itself, if need be, and diving off to some distance, when it rises as suddenly as it went down, and with a shake of the head, urges itself on its way. If suddenly startled, it is curious to see how 'instanter' it vanishes with a quick plash; and this is even more especially to be admired, if it has risen to the surface after having been before alarmed, when, if the cause of disquietude is still visible, its descent again seems but a continuation of its upward movement. It is able to remain under the water for an almost incredible time, if need be, and when anxious to escape from threatening danger, rarely resorts to flight, though it will do so at times, but endeavours to conceal itself after the first alarm among the tangled plants that fringe the margin, or carpet the floor of its native element.

If alarmed they dive, this, as just said, being the mode of escape they prefer to attempt. They are spirited birds, and when taken will attack any object within their reach. The young, when hatched, presently take to the water, and swim about with their parents to be fed, diving also with innate readiness.

I have only seen these little things fly close over the water, with trailing legs, dappling the surface as they have gone along. They have however been observed flying at a height of from six to ten feet. Their flight is tolerably rapid. It is on and below the surface of the water, however, that they are most at ease, and every movement is characterized by the most consummate dexterity and facile quickness and agility: the most expert waterman that skulls his skiff on the Thames or the Isis, is but an humble and unskilful imitator of the Dabchick. In moving straightforward the wings are used to aid their progress, as if in the air, and in turning 'it has an easy gliding motion, feet and wings being used as occasion requires, sometimes on one side and sometimes on the other.' This species walks but indifferently, as may readily be imagined from the position of the legs, so very far back.

It is pleasant to watch the parent bird feeding her young.—Down she dives with a quick turn, and presently rises again with, five times out of six, a minnow or other little fish, glittering like silver in her bill. The young rush towards the spot where the mother has come up, but she does not drop the fish into the water for them to receive, until she has well shaken it about and killed it, so that it may not escape, when for the last time in its own element. I have seen a young one, which had just seized, out of its turn I have no doubt, the captured prey, chased away by her, and pursued in apparent anger, as if for punishment, the following one being willingly given the next fish without any demur. I have noticed the old bird feeding the young one so late as the 14th. of September. Small fish or young fry comprise their ordinary food, together with shrimps and marine insects, when sojourning for a while by the sea. Plants are also made use of, and some of the feathers of the bird itself are swallowed. A Dabchick was found dead at Witchingham, in Norfolk, apparently choked by a bull-head fish, which it had been swallowing, the spines being seen sticking in its throat. Other similar instances have very often occurred.

The note of this interesting species is a lively, pretty, and sonorous, though somewhat shrill, chirruping, quickly repeated. It is uttered when on the wing in the spring, as well as when on the water at other times. It has been likened to the sound made by drawing a stick across a rail.

The nest of the Dabchick, which is placed at a little distance, often as much as twenty or thirty yards, from the water, on or among any plants that grow near the sides of rivers, lakes, and ponds, is composed of short pieces of roots, reeds, rushes, and flags, and a considerable quantity of these is occasionally put together, sometimes to the height of a foot or more; when dry the whole naturally becomes very brittle. It is seldom raised more than an inch or two above the water, so that, except in hot seasons, it generally is quite soaked with water.

The hen bird may be seen pecking about her while on the nest. It is related that until the latter is finished she is in the habit of sitting at night on a similar but smaller tuft which she has raised by its side.

The eggs are four, five, or six in number, oval in shape, tapering towards each end, and dull white in colour. The bird is in the habit of covering them over with weeds when leaving the nest for a time, at least, as soon as they are all laid; and it would further appear that the covering is not then removed, but that she sits on both it and the eggs: they become a good deal stained in consequence. The period of breeding is about the middle of May.

The young take to the water immediately on being hatched.

Male; weight, between six and seven ounces; length, from nine inches and a half to ten inches; bill, black, the tip paler, a light horn-colour; the upper mandible is straight, the under one angular; in winter the lower mandible is paler than the upper; the basal part of both is yellowish or yellowish white; iris, deep reddish brown. Head on the crown, neck on the back, and nape, dark brownish black, glossed with green; the head on the sides is chesnut red: in winter all these are brown. The feathers about the head are soft and flexible, and capable of being puffed out or laid flat at the pleasure of the bird. Chin, dull black, also with a tinge of green. Throat and breast, dull but glossy silvery greyish white, with a tint of black; on the sides dusky brown. Back, rusty blackish brown, with a tinge of dull greenish, shading towards the sides of the breast into a paler tint, which is continued down to the flanks. In winter the back is brown—the lower part is paler than the upper.

The wings in the stretch are about one foot four inches; primaries, dark brown, in winter some of them are greyish white; secondaries, white at the base and on the inner webs, apparent when the bird is flying; in winter they are greyish. Legs and toes, dull blackish green, the insides paler, and with a tinge of yellowish red. They are large in size in proportion to that of the bird.

The plumage of the young chick is dark brown on the head, neck, and back, with longitudinal streaks of pale yellowish brown; the breast silvery white. In the first year's plumage the bill is pale yellowish brown at the tip, the remainder brownish horn-colour; the head, neck on the back, and nape, rather pale brown, with a mixture of grey and rufous; the sides of the neck still lighter, eventuating in reddish grey; the chin white; the breast greyish white; the sides clouded with brown.

# GREAT NORTHERN DIVER.

NORTHERN DIVER. IMBER. GREAT DOUCKER. RING-NECKED DIVER.

| | |
|---|---|
| *Colymbus glacialis,* | Pennant. Montagu. Bewick. |
| " " | Fleming. Selby. Jenyns. Gould. |
| " *immer,* | Pennant. Montagu. |

*Colymbus*—A Diver. *Glacialis*—Of or belonging to ice.

This Great Diver is in Europe found in Iceland, Spitzbergen, the Faroe Islands, Russia, Norway, Sweden, Denmark, Lapland, Finland, Holland, Switzerland, Germany, and France, but in the latter only rarely in comparison with the former, and in Italy a single specimen is all that has occurred.

In America in Labrador, Greenland, the Fur Countries, and thence on to the United States.

In Cornwall one was taken in May 1828, near Polperro, and two remained near Looe the whole of that summer. They are not uncommon on that coast in winter. Two were seen off East Looe on the 25th. of October, 1852, and one, no doubt of the same pair, a female, was shot on the 8th. of November. In the following year, in the month of December, they were unusually abundant in that locality, ten or a dozen being not unfrequently seen at a time, and in one instance upwards of thirty. Several were seen in Plymouth Sound in December, 1850, and two of them were shot. One, a male, was obtained in Carrack Road, Falmouth, in March, 1845, and another in January, 1846; one in Gwyllyn Vase Bay, in December, 1847; and on the 28th. of December, 1848, two others were seen there. One has visited the bay every year for several years in May. Near Penzance in like manner they have occurred—one in October, 1844; two in October, 1849. They are met with in the immature plumage on the Hampshire coast in the winter months not unfrequently. One was seen close to Hurst in March 1850, and another, as I am informed by the Rev. J. Pemberton Bartlett, was found in the New Forest, near Fordingbridge, Hampshire, in January, 1851. It attacked the man who found it in a fierce manner.

One, in immature plumage, in the possession of Mr. Chaffey, of Doddington, Kent, was killed near Sheerness about the year 1812. Others near Maidenhead and Pangbourne, Berkshire, in 1794, and near Newbury in 1810. One, a young bird, of which Horace Waddington, Esq., of University College, Oxford, has written me word, on the Isis, between [illegible] and that city. Another was found in a garden at Headington Hill, near Oxford, one morning, after a remarkably stormy night, in October, 1824.

In the county of Nottingham specimens occasionally occur on the Trent. In Buckinghamshire a young specimen was found alive in a deep ditch at Marlborough, on the 8th of May, 1830. It was kept for some time at Chequer's Court, the seat of Lady Frankland Russell, and was then removed to the gardens of the Zoological Society. Several were driven on the Devonshire coast, five of which were procured—one of them a male in full plumage, one at Torbay, in December, 1852. They are not very unusual in winter along that shore, as also all the way from Kent to Northumberland, by Essex, Suffolk, Lincolnshire, Yorkshire, and Durham. In the county of Cumberland, Mr. Heysham says that immature birds occur at the like season on the rivers near the Solway; and in the month of January, 1835, one was killed at Talkin Tarn, near Brampton. In Sussex one was picked up on the 20th of the same month on the top of a high ridge of the Chalk Downs, in the parish of Beddingham. In 1837 one was seen on a pool in Westwood Park, near Droitwich, Worcestershire, the seat of Sir John Pakington, Bart. A fine specimen was met with in Staffordshire, on the River Dove, the 8th of February, 1838. In Surrey three specimens have occurred near Godalming, one at Frensham Pond, and one on the [illegible]. Specimens are occasionally shot on Breydon Broad, near Yarmouth, Norfolk, the young birds not so rarely. The winter is the most productive season, and in the summer they are very rarely seen. One at Thorpe [illegible], the 4th of December, 18[illegible].

In Scotland the Great Northern Diver is [illegible] more [illegible]

# GREAT NORTHERN DIVER.

NORTHERN DIVER. IMBER. GREAT DOUCKER. RING-NECKED DIVER.

| | |
|---|---|
| Colymbus glacialis, | PENNANT. MONTAGU. BEWICK. |
| " " | FLEMING. SELBY. JENYNS. GOULD. |
| " immer, | PENNANT. MONTAGU. |

Colymbus—A Diver. Glacialis—Of or belonging to ice.

This Great Diver is in Europe found in Iceland, Spitzbergen, the Faroe Islands, Russia, Norway, Sweden, Denmark, Lapland, Finland, Holland, Switzerland, Germany, and France, but in the latter only rarely in comparison with the former, and in Italy a single specimen is all that has occurred.

In America in Labrador, Greenland, the Fur Countries, and thence on to the United States.

In Cornwall one was taken in May 1855, near Polperro, and two remained near there the whole of that summer. They are not uncommon on that coast in winter. Two were seen at Looe on the 29th. of October, 1852, and one, an adult of the same year, a female, was shot on the 8th. of November. In the following year, in the month of December, they were unusually abundant in that locality, ten or a dozen being not infrequently seen at a time; and in one instance upwards of thirty. Several were seen in Plymouth Sound in December, 1852, and two of them were shot. One, a male, was obtained in Carrick Road, Falmouth, in March, 1848, and another in January, 1849; one in Gwyllyn Vase Bay, in December, 1847, and on the 28th. of December, 1848, two others were seen there. One has visited the bay every year for several years in May. Near Penzance in like manner they have occurred: one in October, 1844; two in October, 1849. They are seen with in the immature plumage on the Hampshire coast in the winter months not very rarely. One was seen close to Haslar in March, 1853; and another, as I am informed by the Rev. J. Pemberton Bartlett, was found in the New Forest, near Fordingbridge, Hampshire, in January, 1851. It attacked the man who found it in a fierce manner.

One, in immature plumage, in the possession of Mr. Chaffey, of Dodington, Kent, was killed near Sheerness about the year 1842. Others near Maidenhead and Pangbourne, Berkshire, in 1794, and near Newbury in 1810. One, a young bird, of which Horace Waddington, Esq., of University College, Oxford, has written me word, on the Isis, between Godstowe and that city. Another was found in a garden at Headington Hill, near Oxford, one morning, after a remarkably stormy night, in October, 1824.

In the county of Nottingham specimens occasionally occur on the Trent. In Buckinghamshire a young specimen was found alive in a deep ditch at Risborough, on the 9th. of May, 1850. It was kept for some time at Chequer's Court, the seat of Lady Frankland Russell, and was then removed to the gardens of the Zoological Society. Several were driven on the Devonshire coast, five of which were procured—one of them a male in full plumage; one at Torbay, in December, 1850. They are not very unusual in winter along that shore, as also all the way from Kent to Northumberland, by Essex, Suffolk, Lincolnshire, Yorkshire, and Durham. In the county of Cumberland, Mr. Heysham says that immature birds occur at the like season on the rivers near the Solway; and in the month of January, 1835, one was killed at Talkin Tarn, near Brampton. In Sussex one was picked up on the 20th. of the same month on the top of a high ridge of the Chalk Downs, in the parish of Beddingham. In 1821, one was seen on a pool in Westwood Park, near Droitwich, Worcestershire, the seat of Sir John Pakington, Bart. A fine specimen was met with in Bedfordshire, on the River Ouse, the 4th. of February, 1830. In Surrey three specimens have occurred near Godalming, two on Frensham Pond, and one on Old Pond. Specimens are occasionally shot on Breydon Broad, near Yarmouth, Norfolk; the young birds are the more common. The winter is the most productive season; in the summer they are very rarely seen. One at Thornham about the 4th. of December, 1851.

In Scotland the Great Northern Diver is not very unfrequent on the Banffshire coast. It also inhabits the northern parts of Sutherlandshire; and Mr. Selby mentions that a pair were observed near the mouth of the Durness Frith in full summer plumage. One was shot off the mouth of the Spey, which was found to contain no fewer than nineteen flounders and a salmon-trout. In Orkney, as before mentioned, young birds are common at all seasons of the year, and old ones, which are more abundant in winter, are not unfrequently seen in summer, and are therefore believed to breed in the islands, that is, some pairs, for the generality leave about the latter end of May or beginning of June. In the Hebrides, Mr. Macgillivray mentions that they were observed in plenty till the beginning of that month. In Shetland, too, the bird is, or rather used to be, plentiful. Mr. Robert Dunn shot one in Hammer Voe, in the parish of Northmaven, on the 28th. of June. It was in perfect plumage, and he was informed that it had been there all the summer.

In Ireland it has occasionally occurred on the Wexford and other shores, and Dr. Fleming has recorded the occurrence of one off the coast of Waterford, in the month of July, 1816. Thomas Eyton, Esq., of Eyton, mentions its appearance in North Wales; and Mr. Dillwyn has noted it in the vicinity of Swansea.

The sea is mainly the resort of this species, but it is occasionally found on rivers, and breeds on the larger ones and inland lakes;—this chiefly within the polar circle. St. Kilda's 'lonely isle' is one of their more southerly stations.

They are very shy in their natural habits, nevertheless they have been kept for some time in confinement, when well supplied with water. They are courageous as well as powerful birds, and the blows that they are able to give are formidable from their size and strength.

Montagu says, 'A Northern Diver, taken alive, was kept in a pond for some months, which gave us an opportunity of attending to its manners. In a few days it became extremely docile, would come at the call from one side of the pond to the other, and would take food from the hand. The young, when only a day or two old, are led to the water by their mother.

The following account is quoted by Yarrell, as given by Mr. Thomas Nuttall, of Boston, who kept another for some time:—'A young bird of this species which I obtained in the Salt Marsh at Chelsea Beach, and transferred to a fish-pond, made a good deal of plaint, and would sometimes wander out of his more natural element, and hide and bask in the grass. On these occasions he lay very still until nearly approached, and then slid into the pond and uttered his usual plaint. When out at a distance he made the same cautious efforts to hide, and would commonly defend himself in great anger, by darting at the intruder, and striking powerfully with his dagger-like bill. This bird, with a pink coloured iris, like albinos, appeared to suffer from the glare of broad daylight, and was inclined to hide from its effects, but became very active towards the dusk of the evening. The pupil of the eye in this individual, like that of nocturnal animals, appeared indeed dilatable; and the one in question often put down his head and eyes into the water to observe the situation of his prey. This bird was a most expert and indefatigable diver, and remained down sometimes for several minutes, often swimming under water, and, as it were, flying with the velocity of an arrow in the air. Though at length inclining to become docile, and shewing no alarm when visited, it constantly betrayed its wandering habits, and every night was found to have waddled to some hiding-place, where it seemed to prefer hunger to the loss of liberty, and never could be restrained from exercising its instinct to move onwards to some secure or more suitable asylum.'

These birds have the faculty of sinking the body below the surface of the water if suddenly alarmed, the head and neck alone being extant. When diving for food, one minute appears to be the usual length of time that they remain below; less, of course, if successful in their pursuit. It is said, however, by Meyer, that they can remain underneath the surface for the long space of three minutes and a half, and that when pursued, the bird manages to dive with ease for one hundred and fifty or a couple of hundred yards. In swimming and diving the legs only appear to be used in general, and not the wings, though the latter are also, according to Audubon. They progress with very great speed if pursued, and dive with instantaneous quickness. They resort to this mode of escape in preference to attempting flight, no doubt for the reason elsewhere spoken of. Mr. Selby asserts, from observation, that they can swim at the rate of more than seven miles an hour. They consort together in small parties of four or five. They are often to be seen floating and drifting on the water as if asleep, the head pillowed back among the feathers. In the roughest weather they are equally at ease, and fish among the heavy surf with fearless confidence. They cannot walk, properly speaking, but are only able to shuffle along, neither can they rise on the wing from the ground. Even on the water they are obliged to scurry forwards for some distance before being able to get up. This is 'accompanied by a frequent repetition of its call-note. When a party of six or eight of these birds rise together, they mount high in the air, and follow one another in a line.'

They fly in a strong and able manner, and Dr. Richardson observes that when on the wing they advance swiftly. If their nest be threatened, they exhibit natural alarm, and wheel in circles round the intruder.

They feed on small crabs and crustacea generally, frogs, insects and their larvæ, flat-fishes, herrings, sprats, and other kinds of fish. The smaller ones they gorge whole, the larger they are obliged to swallow piecemeal. They destroy, as will readily be conceived, a great quantity, so that where they are sojourners, their absence rather than their presence is desiderated by the fishermen. In stormy weather they suffer much from want of food, their prey having probably removed into deeper water.

The note, which is loud and plaintive, is said by Meyer to resemble the words 'who, who,' or 'whee, whee,' frequently repeated. Other sounds are also uttered, both of a deep and a high character.

The nest of this fine bird is placed close to the water's edge, so as to admit of an immediate retreat, if necessary, to that element.

The eggs are two, or sometimes, according to Audubon, three in number. Their colour is a dark olive greenish brown, with a few spots of a darker shade, or purple reddish.

Both birds take their turns in sitting, and when the young are hatched, continue an equal and watchful care over them as long as it is required.

Male; weight, twelve pounds, or as much as fourteen; length, two feet six to two feet nine inches; bill, black, the tip paler. It is 'nearly three inches long, much compressed, tapering, the upper mandible gently arched, the lower one channeled beneath, and deepest in the middle, the angle sloping gradually upwards to the point.' Iris, red. Head, crown, neck, nape, chin, and throat, deep black, with strong reflections of green and purple; on the front of the upper part of the last-named there is a crescent-shaped band, and lower down on each side an oblong space of the same colour, barred with black, the feathers having raised white margins. Breast, white, streaked on the sides with dusky greyish white, the feathers having raised white margins. Back, dusky, spotted all over with oblong, oval, and round spots of white; each feather has two spots, one on each side of the shaft near the tip, forming rows.

The wings extend to the width of from four feet eight inches to five feet or more, the axillary feathers white, with a black streak down the centre of each; greater and lesser wing coverts, black, with the white spots smaller than on the back; primaries, black; the tertiaries end in white. Tail, black; upper tail coverts with small white spots. Legs and toes, dusky black on the outer surface, and greyish on the inner; webs, dusky black.

It would appear that at the autumnal moult the bird reassumes the dress of the young. (See 'Zoologist,' page 2775.)

In the autumn the dark feathers of the head and neck are more or less replaced by white ones, and the back becomes likewise beautifully spotted by the feathers being tipped with white.

The female is not so large as the male.

The young are at first covered with black down; subsequently they have the upper bill dusky grey, the lower one paler, and are dusky grey on the back and upper parts, the breast being white. When nearly full grown, the young male has the bill pale horn-colour, the lower mandible much paler than the upper one; iris, reddish brown. Head, crown, neck, and nape, greyish black, with a tinge of brown; chin, throat, and breast, white. Back, deep brown, the edges of the feathers paler, and of a grey tint. Legs and toes on the front, light greenish brown.

'After the second general moult,' says Mr. Selby, 'a dark band appears on the middle of the neck, and the upper plumage becomes darker, losing the pale grey edges that distinguish the young of the year, and a few white spots begin to shew themselves. The succeeding moult developes still more the bar and neck collar, and the head and neck become darker, or of a blackish green, speckled upon the chin and throat with white. The upper plumage also acquires its glossy black lustre, with the accompanying quadrangular white spots.'

The plumage appears not to be completed till the third year.

Sir William Jardine writes, 'In another specimen further advanced, we have the under parts still pure, all the upper plumage darker, and advancing further on the neck and breast, sparingly intermingled with the black and white nuptial plumes, particularly on the wings; the tail tipped with white; the bill slightly darker than in the last. In the third specimen, when we are inclined to believe that the perfect plumage is going off, we have the head and neck dark, clouded with grey above, and very much waved with white on the chin and throat, the striated collar distinctly apparent; the under surface pure white, the upper with a large proportion of the distinct white marking, but intermixed, particularly along the middle line of the back, with apparently new dark feathers, having grey margins as in the young.'

The plate is from a drawing by John Gatcombe, Esq., of Wyndham Place, Plymouth. It is one of the best figures of a bird I have ever seen.

# BLACK-THROATED DIVER.

## LESSER IMBER. NORTHERN DOUCKER. SPECKLED LOON.

*Colymbus arcticus*, Linnæus.

*Colymbus*—A Diver. *Arcticus*—Belonging to the Arctic regions.

This beautiful Diver is common in Norway on the lakes on the higher parts of the mountains, and the same remark applies to Finland, Sweden, and Lapland. It is noticed besides in Holland, Russia, Germany, France, Switzerland, and Italy, and belongs also to Asia, being seen in Siberia, Kamtschatka, and Japan; and in America occurs from Hudson's Bay to the United States, but in the latter not so commonly as in the more northern districts.

A specimen of the Black-throated Diver was killed near Purfleet, on the Thames, the 21st. of January, and another, a male, on Barton Park, Norfolk, the end of January, 1850; one also, an adult male, about the middle of January, [illegible] on the River Wensum, at Taverham; a pair on one of the Broads in the year [illegible]. In Essex, one at [illegible] the middle of January, [illegible]

In Yorkshire, two were shot off Scarborough by Mr. T. [illegible] of [illegible] in the year [illegible]. In Norfolk, it is sometimes met with in winter, but has been more rarely procured in summer plumage. In Lincolnshire, a fine specimen [illegible] [illegible] of January, [illegible] [illegible] [illegible] [illegible] [illegible] was [illegible] young [illegible] February, [illegible] its glossy black lustre, with the accompanying quadrangular white spots.'

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Sir William Jardine writes, 'In another specimen further advanced, we have the under parts still pure, all the upper plumage darker, and advancing farther on the neck and breast, sparingly intermingled with the black and white tipped plumes, particularly on the wings; the tail tipped with white; the bill slightly darker than in the last. In the third specimen, which we are inclined to believe that the perfect plumage is going off, we have the head and neck dark, shaded with grey spots, and very much waved with white on the chin and throat; the striated collar distinctly apparent; the under parts pure white, the upper with a large proportion of the decided white marking, but intermixed, particularly along the middle line of the back, with apparently new dark feathers, having grey margins as in the young.'

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A specimen of the Black-throated Diver was killed near Purfleet, on the Thames, the 21st. of January, and another, a male, on Barton Pond, Norfolk, the end of January, 1850; one also, an adult male, about the middle of January, 1848, on the River Wensum, at Taverham; a pair on one of the Broads in the year 1832. In Essex, one at Chesterford, the middle of January, 1850.

In Yorkshire, two were shot off Scarborough by Mr. T. Chapman Broune, of Leicester, in the year 1850. In Norfolk, it is sometimes met with in winter, but has been very rarely procured in summer plumage. In Lincolnshire, a fine specimen was obtained at Trillingham Pond, near Lincoln, the 24th. of January, 1850. One of these birds was killed near Sittingbourne, Kent, in 1840, of which Mr. Chaffey has written me word. One was found dead at Thornham, on the Norfolk coast, in October, 1855. In Sussex, an immature specimen was obtained at Pevensey, in November, 1850. A male, a young bird, was shot in February, 1850, at Blyth, in Northumberland; another off Cullercoats on the 5th. of February, 1848; in 1830, a fine mature specimen was killed at Tweedmouth, and several young ones along the shore and upon the River Tyne: others on the Durham coast.

It has occasionally occurred on Frensham Pond, near Godalming, Surrey. In Cornwall it is very rare; one was shot on Carrack road, in January, 1846; others at other times: so also in Devonshire. Young birds are occasionally obtainable in the London markets. A very beautiful specimen, a male, was procured on the 2nd. of June, 1842, in Sandwich Haven, in the county of Kent. In Oxfordshire, a young bird of this species was shot near Cassington, in the winter of 1828.

In Scotland, this Diver occurs from north to south, but least numerously in the latter. Sir William Jardine has seen three or four in a day on the Frith of Forth. A few still breed on some of the lakes of Sutherlandshire—Loch Assynt, Loch Shin, Loch Laighall, Loch Awe, and elsewhere.

In Orkney some remain throughout the year; a few have been shot of late at South Ronaldshay, Scapa, Kirkwall, Sanday, etc. So also in the Hebrides: North Uist is a breeding-place. The species is a winter visitant to Iona.

In Ireland it is very rare; the county of Dublin has furnished a specimen, and it has also occurred in the north.

As soon as the ice begins to break up in the spring, within twelve hours, it is said, of open water being seen, they betake themselves to secluded inland lakes, to make their nests in due time, but thence return again to the sea when they have young ones able to accompany them;—'Ver non semper viret.'

They are very shy and wary birds, and though unwilling to take wing, dive on the most distant appearance of danger. They can, however, fly strongly and well, and in the summer, when they have young, may be seen at a vast height bringing fish from some other lake to their nest. They descend very suddenly, and in a slanting direction. They are extremely attentive to the wants of their young.

The skin of this bird is highly valued by the Esquimaux for its warmth and beauty, and is accordingly converted into articles of wearing.

The Black-throated Diver swims and dives with infinite dexterity, and has also considerable powers of flight available on occasion, both as regards quickness and the distance of progression: the wings are widely extended and rapidly beaten.

Mr. Selby says that he has known one remain under water for several minutes together, coming up at nearly a quarter of a mile from where it had gone down, and that at the rate, as he supposed, of not much under eight miles an hour. On the ground it can only shuffle along for a short distance.

They feed on fish, frogs, water-insects, and portions of plants.

The note of this bird is wild and of a melancholy sound, and is heard at a great distance.

The nest is naturally placed close by the brink of the water. It is made of a few straws or stems of plants, placed in a hollow formed or increased by the bird for the purpose.

The eggs of the Black-throated Diver, usually two in number, are laid on the bare earth, two or three yards from the water's edge. They are of a dark yellowish olive brown colour, with darker or blackish spots.

Male; length, about two feet four inches; bill, dark bluish black; it slightly turns upwards. Iris, red; forehead, dark grey; crown, neck on the back, and nape, rich light ash grey; the neck on its sides and lower part behind is streaked lengthwise with black and white lines, giving it a raised appearance; these marks are caused by white margins to the feathers, which otherwise are black. Chin, throat, and neck in front, rich dull black, the latter with a fine reflection of purple and green, observable when viewed in a side light, but crossed on the upper part by a collar of short striated black and white lines; breast, white, the sides waved with black streaks, the flanks dusky; back, nearly black with green reflections; on the upper part are two long patches of square white spots; spreading from near the base of each of these, on either side, descend the long scapular and tertiary feathers, crossed, as presently mentioned, with fourteen or fifteen bars of black and white.

The wings have the axillary plume black; greater and lesser wing coverts, black, with a few specks of white, the tips of the feathers having a triangular-shaped mark of that colour; primaries, dusky black; the tertiaries have a square patch of white on each side of the shaft, by which a series of bars is formed across. Tail, nearly black, the sides greenish black; under tail coverts, dusky. Legs and toes, dark blackish brown in front, paler on the inside with a reddish tinge. Webs, pale dusky.

This species experiences a partial moult in the spring, and the black on the throat is at first varied with some white feathers.

The female is a little less than the male.

In the bird's first year, the head and neck on the back are grey; throat, white; back, deep brownish grey, margined with lighter grey.

At the next moult the head and nape become purer grey, and some black feathers shew themselves on the hind part of the neck. The back becomes darker, and a few black feathers become apparent here also.

The full plumage is not attained till the end of the third year.

# RED-THROATED DIVER.

SPRAT LOON. RAIN GOOSE. SPECKLED DIVER, (YOUNG.)

| | |
|---|---|
| *Colymbus septentrionalis,* | PENNANT. MONTAGU. BEWICK. |
| " *stellatus,* | PENNANT. MONTAGU. BEWICK. |
| *striatus,* | GMELIN. |

*Colymbus*—A diver. *Septentrionalis*—Belonging to the north.

THE Red-throated Diver is another very fine and striking-looking bird.

In Norway it is a very common species, and is to be seen on most of the lakes and fiords, both salt-water and fresh, but chiefly where the latter prevails. It also belongs to Finland, Lapland, Denmark, Sweden, Russia, and Kamtschatka, the Faroe Isles, and Iceland, and has been taken on the coasts of Holland, France, and Italy, Greece, and in Switzerland. In Asia, M. Temminck assigns it to Japan, and it is said also to occur in Siberia, Tartary, and along the shores of the Caspian Sea, the Black Sea, and the Sea of Azoff. Likewise in America in various parts of the northern half of the continent, on the shores of Labrador, Boothia, the Bay of Fundy, Hudson's Bay, the Bay of Boston, and along different other shores and lakes of the United States; then also in Greenland.

The young occur in the winter along the Cornish coast, more or less commonly. One adult was shot near Penzance, February, 3rd., 1845. Immature birds were frequently there and at Gwyllyn Vase. In Devonshire they also are not uncommon, and the same observation applies to the counties of Kent, Essex, Sussex, on the coast of which many appeared in the winter of 1795, as recorded by Montagu; Hants, Durham, and Northumberland. They may be [illegible] for sale in the London markets. One was caught on the Cumberland coast on the 1st of May, [illegible].

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| | |
|---|---|
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The young occur in the winter along the Cornish coast, more or less commonly. One adult was shot near Pennance, February, 2nd., 1845. Immature birds more frequently there and at Gwyllyn Vase. In Devonshire they also are not uncommon, and the same observation applies to the counties of Kent, Essex, Sussex, on the coast of which many appeared in the winter of 1795, as recorded by Montagu; Hants, Durham, and Northumberland. Specimens are often on sale in the London markets. One was caught on the Cumberland coast on the 1st. of May, 1834.

In Oxfordshire it is occasionally found in the neighbourhood of Weston-on-the-Green, in winter. I once had one shot near Lyme Regis, Dorsetshire: others have been procured there also. They are very common on Breydon, Yarmouth, Norfolk, in winter, and are occasionally met with in summer plumage on the coast of that county. Several near Lynn the beginning of 1852.

One of these Divers, an immature specimen, was shot at Blatherwycke, in Northamptonshire, and another fell to the gun of the Hon. T. L. Powys, on the 5th. of May, 1855. In the spring of the same year, one, in winter plumage, of which J. R. Little, Esq. has written me word, was shot near the Whittlesea Wash, in Cambridgeshire. In Lancashire one was caught near Lytham, in a snare set for rabbits, by one of the gamekeepers of Talbot Clifton, Esq., December the 10th., 1849. In Nottinghamshire one was killed near Melbourne, on the 31st. of January, 1846, during the very severe weather that occurred that season. Again, in another inland county, one was shot in the Severn opposite the Deanery at Worcester, about the 1st. of December, 1847, and two others afterwards in the same neighbourhood.

Eight individuals of this species were discovered at Clandon, near Godalming, Surrey, the 14th. of October, 1848, and one of them, a young bird of the year, was secured. One was also shot near Guildford, on the 18th. of the same month; in all probability one of the same party. In Derbyshire one appeared in the beginning of 1844, on the Derwent, near Derby, and was secured.

In Yorkshire one specimen is reported by Dr. Farrar, as having been shot in Woolley Park, in the West Riding, the seat of Godfrey Wentworth, Esq., in July, 1833; a second was found at Banks Hall, near Barnsley; and a third was shot at Staincross. Several have been taken near Sheffield in winter, some at Hebden Bridge, and others near Doncaster and Huddersfield. One at Harehills, near Leeds, in January, 1829; another on the River Ouse in 1838. The immature bird is not unfrequently obtained near York.

This species breeds in the northern parts of Scotland, in Sutherlandshire. Mr. Selby saw a pair of old birds there in June, 1834, which evidently had a nest. Sir William Jardine has shot the bird on the River Annan, in Dumfriesshire, fifteen miles from the sea. So it does also, or used to do, in the Orkneys, where it is not rare. It is most plentiful in Hoy, on which island the nests used to be found; also in the Hebrides and Zetland. In Wales Mr. Dillwyn has recorded its occurrence.

It appears to be common also in winter in Ireland, on all the north, east, and west coasts, and has been met with at Youghall, in the south.

The proper home of this Diver in winter is the sea-board, but it not unfrequently advances to a considerable distance up rivers. It has thus been known to pass London 'viâ' the Thames; but I may, I think, take it for granted that the journey must have been made during the night. In summer they resort to inland waters, seeking for the quiet of such as are secluded.

They come southwards in October and November, and return northwards early in March.

As many as from twenty to twenty-five or thirty of these Divers, and all old ones, have been seen together in a flock. Most commonly, however, with us, small numbers or single birds are to be seen, 'rari nantes in gurgite vasto.' They appear not to be particularly shy.

They fly with rapidity, with the neck stretched out, and often at a great height, in the night-time, and also in the day. On the land they are completely out of their element, being unable either to stand or walk. They appear to be not undisposed to take flight if pursued, but the other mode of escape is commonly adopted. They dive with all the quickness of the rest of their tribe, and can advance below the surface to a distance of eighty or ninety yards.

They feed on sprats and other fish, frogs, and spawn, as also, it appears, on portions of plants. 'He fishes alone, and when he is thus employed, and when the sea is running high, he invariably awaits the approach of the gigantic wave; and as it appears about to break upon him, he quietly makes his dive beneath it: having done this with the most graceful ease, he comes up again in a spot where the water is at the moment calm.'

Their note is a wild, loud, and melancholy wailing cry. It has been expressed by the syllables 'kakera, kakera.' When much given utterance to, it is considered to prognosticate rain, from which supposition one of the provincial names of the bird is derived. Meyer expresses the sound by the syllables 'ah' or 'ech.'

The situations chosen by this species for laying are by small pools on low islands in the sea, the margins of inland lakes, and islets in them, and watery places on higher grounds.

The nest is nothing more than a few rushes or blades and stalks of grass, with leaves and moss, mixed, Selby says, with the down of the bird. It is placed among the stones or gravel close to the water's edge, so that if need be, the bird can slide at once into its all but native, and at all times natural and congenial element.

The eggs are two in number, and equally rounded at both ends. They are of a dull brownish green colour, rather thickly spotted with dark brown.

Male; weight, nearly three pounds; length, two feet and a quarter, or a little over; bill, dark bluish horn-colour; the upper mandible is straight, the lower one somewhat angular in outline; iris, red; head on the sides and crown, the latter the darkest, and neck on the sides, bluish grey, variegated with paler spots and lines; neck on the back, and nape, almost black, but marked with short lines of white, which give these parts a striated appearance; chin, grey, also variegated with paler spots and lines. The throat has an angular-shaped dark red, or reddish brown patch, the base of the angle lowermost, the apex upwards; breast, white, the flanks greyish black, the centres of the feathers darker; back, very dark brown, nearly black, spotted with white, each feather having a paler margin. The wings reach, when extended, to the width of three feet five inches; greater and lesser wing coverts, nearly black, spotted with white; primaries, black. The tail, dark blackish brown, the tip white; under tail coverts, white; legs and toes, dark brownish green in front, the former paler behind, and tinged with purple blue; webs, dark brown.

In the autumn, and also it would appear in the spring, the slate-coloured plumage on the sides of the head, chin, and sides of the neck, as likewise the red plumage on the front of the throat, is interspersed with the white feathers; the feathers on the back are also a mixture of the old brownish grey ones, and the new ones of a blackish grey, with an oblong white spot on each side of the tip of the feather.

It seems, in fact, that this species is subject to two moults in the year, for it is unquestionable that in some instances the red throat is characteristic of the winter, as well as of the summer plumage; on the other hand, so very many more specimens occurring in the winter without than with the red throat, would seem to militate against this supposition, inasmuch as not all of them can be supposed to be young birds, at all events not of the year, only two eggs being laid in the year.

The female is not so large as the male, and the spots on her plumage are not so distinctly defined. Length, one foot nine inches; in the young bird the bill is grey, with a tinge of yellowish red; iris, reddish brown; head, crown, neck on the back, and nape, grey, finely streaked with greyish white; throat and breast, white, the flanks marked with grey spots of an angular shape; back, dark brownish, or blackish grey, the edges of the feathers paler at the tips. Primaries, deep dusky brown; legs, greyish green in front, the inner sides paler.

Selby observes, 'after the second moult, the grey upon the head, cheeks, etc., acquires the tint of the adult; and a few red feathers are often found mixed with the white upon the fore part of the neck. The upper parts assume a deeper tint; the spots of white grow less, frequently changing to a yellowish white; and as the bird advances to maturity entirely disappear.'

In the above paragraph he is speaking of the young bird.

This species, as well as the allied one, has given rise, in the different stages of its plumage, to erroneous opinions, several kinds being made by authors out of two; but I trust that the descriptions I have given of each will be found sufficiently clear to identify the several birds, not only in their more or less advanced states of plumage, but also in the variations which occur in each at the earlier or later periods of the year.

# GUILLEMOT.

SKOUT. WILLOCK. SEA-HEN. FOOLISH GUILLEMOT.

| | |
|---|---|
| *Colymbus Troile,* | LATHAM. STEPHENS. |
| " " | SHAW. FLEMING. |
| *Uria Troile,* | LINNÆUS. GMELIN. |
| " *minor,* | STEPHENS. |

*Colymbus*—A Diver. *Troile*—...........

FAIRLY launched now on the waves of the mighty ocean, a volume indeed of water, the land and the intermediate shore, which, though belonging to both belongs to neither, taken leave of, yet still, as will be seen, I have not 'cast off the painter,' and I hope that by means of this ultramarine telegraph, a clear understanding may still be kept up by my readers, of the forms and features of the wild birds of the wild waters, whose portraits in their turn I now proceed to give. In other words, having completed, in the preceding volumes, the History of the British Land Birds, Waders, and others which pertain more or less to both land and sea, I now enter upon that of those which may the most strictly speaking be called sea-birds. Truly in following them, though only with the eye of the mind, we shall 'see the works of the LORD and His wonders in the deep.'

The present species is frequent in Greenland, and about Hudson's Bay, in North America, from whence some individuals advance as far south as the United States.

In Europe, they occasionally make their way from Nova Zembla, the Ferroe Islands, Iceland, Norway, and Holland, by the Straits of Gibraltar to Italy and Sicily; and in Africa, in like manner, are found along the northern shores. In a few instances the species is recorded to have occurred on the lakes of Switzerland.

The Guillemot is ubiquitous on our coasts, being frequent from Burlington to Yarmouth Roads, and thence to Devonshire, and so on all round the island.

This bird has occurred in Oxfordshire, the Hon. T. L. Powys has informed me; one was killed on the River Isis, at Sandford, near Oxford, in October 1836. In the adjoining county of Buckingham, one, a male, was caught in the River at Fenny Stratford, on the 13th of November, 1852, during the heavy floods which then prevailed, and there was another seen at Simpson the next day.

In Scotland they breed in vast numbers on the Island of Handa, as also in Sutherlandshire and elsewhere; so they do also on the Fern Islands off the Northumbrian coasts, and at Flamborough Head, in Yorkshire.

They are equally abundant in the Orkney and Shetland Islands, and the Hebrides. So too in Ireland are they plentiful on all parts of the coast.

A few formerly bred on the cliffs at Hunstanton, Norfolk; some used to do so also near Tenby, in Wales.

The Foolish Guillemot is so called because it shews but little apprehension of danger, and allows a near approach. The observations I made on a similar derivation of name in the case of the Dotterel may be seen in my account of that bird, and they will apply equally to that of the species at present under consideration.

In the places where these birds most do congregate, numbers sit side by side in rows, and when one flies away, all successively take wing in such regular order that, when seen at a certain distance, they appear as if they were actually strung together: they never take wing in a body, but always one after another. Again, when they can be seen sitting in a long string on the edge of some cliff, their behaviour is most amusing, for you then see them complimenting each other, right and left, when they are, and also welcome the new-comers, by bowing to them, and uttering their odd notes, which sound like [illegible] etc.

These birds are of peaceable habits, being [illegible] and other [illegible] in the matter of incubation, [illegible] has been [illegible]

In the eighth volume of the 'Magazine of Natural History,' I wrote some years since, [illegible] opportunity of observing a Guillemot [illegible]

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These birds are of sociable habits, both as regards their own kind and other species, except, as mentioned presently, in the matter of nidification, so to call it where no artificial nest is made.

In the eighth volume of the 'Magazine of Natural History,' I wrote some years since—'I lately happened to have an opportunity of observing a Guillemot diving in very clear water, and was much struck with the great similarity of its wings both in their shape and in its manner of using them under the surface, to the fins of a fish, 'remigium alarum;' and in the water, instead of the air, the analogy loses none of its force.'

They are excellent divers, and though bulky birds, swim in a lightsome manner. They fly quickly at a low height, the wings being beaten with short repeated strokes: they have some difficulty in rising from the surface. 'During the breeding-season they are generally compelled to make a circuitous flight before they can attain a sufficient elevation to reach the ledge of rock selected for that purpose.'

They feed on sprats, young herrings, anchovies, sardines, and other fish, mollusca, testacea, and sea-insects.

Mr. Couch observes of the Guillemot, in his 'Illustrations of Instinct,' 'I have watched with much interest the proceedings of this bird when capturing the stragglers of a school of young mullets, and the admirable skill with which their dispersion was prevented, until a full meal had been secured. It is the nature of this bird, as well as of most of those birds which habitually dive to take their prey, to perform all their evolutions under water with the aid of their wings; but instead of dashing at once into the midst of the terrified group of small fry, by which only a few would be captured, it passes round and round them, and so drives them into a heap, and thus has an opportunity of snatching here one and there another, as it finds it convenient to swallow them, and if any one pushes out to escape, it falls the first prey of the devourer.'

Towards the end of March or beginning of April, they assemble in countless thousands, with a view to lay and hatch their eggs, and at times even darken the sea with their prodigious numbers. When the work of incubation is over, they repair in small parties to the sea.

The Guillemot makes no nest, but lays her single egg upon the barren rock. Countless numbers of these birds breed together on the rocks or cliffs that abut upon the ocean, thinking there to find that security, which indeed they would find were it not for the superiority of mind over instinct. Incubation continues for a month. The old bird is believed to convey her young down to the sea on her back.

The eggs are very large in proportion to the size of the bird, and more than ordinarily narrowed at one end and widened at the other. They vary in an extraordinary manner, and a description of the principal varieties only would be almost endless, 'adeo sunt multa.' Some are entirely white, others more or less spotted with brown, and others again bluish green, blotted and streaked with dark reddish brown or black. Some are entirely green. 'The shape of the egg, which is very tapering, prevents it from rolling off into the sea; for when moved by the wind, or other circumstances, it only rolls round its own circle, without changing its first immediate situation.' If the first egg be taken a second is laid, and if the second, a third.

J. W. Pease, Esq., of North Lodge, Darlington, has favoured me with drawings of a series of the principal varieties of the eggs of the Guillemot.

In their breeding-places they choose separate ledges of rock for themselves, apart and quite distinct from the other kinds which rear their young in the same situations.

The young are able to take to the water when about five or six weeks old.

Male; weight, from a pound and a half to a pound and three quarters; length, one foot five to one foot six inches; bill, bluish black: both mandibles are slightly notched near their points. The inside of the mouth is rich yellow; iris, very dark brown. Behind the eye a narrow line, formed by a division of the feathers, runs backwards and downwards. Head, crown, neck on the upper part, nape, chin, and throat, in summer dusky black; in winter the crown of the head and back part of the neck are brown, or mouse-coloured; the front white. The feathers are short, and very close set. Breast, white, the flanks streaked with blackish grey. Back, greyish black, more or less tinged with brown.

The wings measure in extent about two feet three and a half to two feet four inches; greater and lesser wing coverts, dull black; primaries, dull black. The secondaries are dull black, tipped with white, which colours form a bar across the wings; tertiaries, dull black. Legs and toes, dusky brownish black; lobes, dusky brownish black.

During the autumnal moult, so to call it, for it often begins so soon as the end of June, or beginning of July, they frequently lose such a number of the quill feathers as to be unable to fly.

The female is slightly less in size than the male.

The young are at first covered with down of a blackish grey colour, with white tips to the feathers, on the upper parts, and white beneath. The bill is shorter, and the notch on each mandible not so clearly defined.

Theodore Compton, Esq. has given me a drawing of the present species for the use of this work.

# BRUNNICH'S GUILLEMOT.

THICK-BILLED GUILLEMOT. LARGE-BILLED GUILLEMOT.

*Uria Brunnichii*, FLEMING. JENYNS.
" " GOULD. THOMPSON.

*Uria*—[illegible]. *Brunnichii*—Of Brunnich.

THE present species was first distinguished as a distinct one by Brunnich, and subsequently named after that naturalist by Colonel Sabine.

In Europe these birds breed in vast numbers in Iceland, and are also met with at the same time in the Ferroe Islands, Spitzbergen, Norway, and Sweden, and thence northwards throughout the Arctic regions. In Italy one was shot at Naples.

In America it occurs in and about Greenland, Baffin's Bay, Davis' Straits, and other parts of the northern coast.

In Scotland, several have occurred in different places.

In Ireland, Colonel Sabine noticed it on the coast of the county of Kerry.

In Orkney one was shot several years ago, and a specimen was also seen off [illegible], one of the Shetland Islands, by Captain Sir James C. Ross, R.N.

The eggs of this species are, like those of the common kind, most variable in colour. The ground tint is greenish blue. They are, Mr. Hewitson observes, 'not frequently streaked and blotched like those of the other, but sometimes very regularly and beautifully marked all over with small spots.'

Male; bill black, the base of the upper mandible nearly white. It is somewhat shorter than in the other, [illegible] [illegible] but it goes just to [illegible] that [illegible] [illegible] [illegible] [illegible]

## BRUNNICH'S GUILLEMOT.

### THICK-BILLED GUILLEMOT. LARGE-BILLED GUILLEMOT.

| | |
|---|---|
| *Uria Brunnichii,* | FLEMING. JENYNS. |
| " " | GOULD. TEMMINCK. |

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Male; bill, black, the base of the upper mandible nearly white. It is somewhat thicker than in the other closely allied species, but 'il poco piu' is all that can be attached to its character, sufficient however for the purpose of scientific discrimination. Iris, small and dark, the line behind it only extends backwards for an inch. Head, crown, neck on the back and nape, dull black, the very close texture of the feathers giving a peculiar tint to these birds. Chin, dull black, descending on the sides; throat and breast, white; back, dull black.

Greater and lesser wing coverts, dull black, their outer edges grey; primaries, dull black; secondaries, dull black, their tips white, forming a bar across the wing; tertiaries, dull black. Tail, dull black. Legs and toes, bright coral red; webs, bright coral red.

The female resembles the male in plumage.

The figure on the plate is from a drawing by John Gatcombe, Esq., of Plymouth.

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The female resembles the male in plumage.

The figure on the plate is from a drawing by John Gatcombe, Esq., of Plymouth.

# RINGED GUILLEMOT.

## BRIDLED GUILLEMOT.

*Uria lachrymans,* GOULD. TEMMINCK.

*Uria............?* *Lachrymans*—Weeping.

THIS Guillemot derives its name, or, to speak more accurately, its names, English and Latin, from the narrow white streak drawn backwards and downwards from the eye, giving a fancied resemblance, as imagined by some, to a bridle, and by others to the trickling down of a tear. This is the only ostensible mark of difference between it and the Common Guillemot, from which it was first, as it appears, distinguished by Choris, and of which it has been considered by others only as a variety, the two species, or supposed species, being often found consorting together.

In Europe they breed on Grimsey, an island north of Iceland; and they also occur on the coasts of Scandinavia.

The present species appears to be more common on the Welsh coast than elsewhere in this country. In the county of Norfolk one was shot at Yarmouth, on the 9th. of October, 1847. They occur in small numbers on the Yorkshire coast. Two were killed by Mr. William Felkin, Junior, of Carrington, near Nottingham, as he has informed me, at Flamborough Head, near Bridlington. Also in the county of Durham. In Sussex one was found dead in Seaford Bay, in December, 1852.

A Bridled Guillemot was shot in Plymouth Sound, by John Gatcombe, Esq., of Wyndham Place, Plymouth, in the winter; and another was obtained in Plymouth Sound in the latter end of the summer. In Hampshire, one at Sepe, in the parish of Fawley, near Southampton, of which the Rev. R. E. Harrisson has written me word.

In Scotland they have been noticed on the Frith of Forth. I am indebted to Mr. Thomas Edward, of Banff, for a notice of the occurrence of this species at the rocks of Gamrie, seven or eight miles from the former place, in June, 1850; the first instance, as he apprehends, of its having been met with in Scotland. He has since recorded, in the 'Banffshire Journal,' another case of its occurrence in Deveron, close to Banff. It was taken up in an exhausted and bewildered state, on the 18th. of February, 1852, after a heavy storm. Several specimens have been shot in Orkney.

In Ireland two individuals had been obtained up to the time of my 'going to press.'

These birds associate in small numbers with the other species, but they appear of somewhat different habits, though not seen by themselves, remaining on the water after the others have taken flight, and then resorting rather to diving than to flight for safety. They are altogether birds of the ocean, and 'What are the wild waves saying?' is a question which they at all times know the answer to.

Mr. Strickland states that the bird breeds regularly at Flamborough, whence he obtained the egg, but in smaller numbers, and in places more difficult of access, than those of the Common Guillemot; and he adds that the eggs are invariably white.

It would appear, on the other hand, from some observations made by Alfred Newton, Esq., in the 'Zoologist,' pages 3495-6, quoting from Mr. Proctor, that in the localities where these birds and the common species build, those of the species before us do so separately, and at a lower elevation.

This bird is rather less in size than the common one. Male; length, about one foot five inches and a half; the bill, which is black, is also rather more slender than in the common species; iris, dark. The eye in this Guillemot has been noticed by John Gatcombe, Esq., of Plymouth, as being considerably larger than in the other; it is encircled by a narrow white band or rim, from which the white line already spoken of extends backwards and downwards about an inch and a half; this mark is seen both in old and young birds, in the male as well as in the female, and in spring, summer, autumn, and winter. Head, crown, neck, nape, chin, and throat, a dark dull olive brown black; breast, white; back, dull greyish black.

Greater and lesser wing coverts, dull greyish black; primaries, dull greyish black; secondaries, dull greyish black, narrowly tipped with white, forming a bar across the wing; tertiaries, dull greyish black. Tail, greyish brown. Legs and toes, brownish black; webs, brownish black.

# BLACK GUILLEMOT.

COMMON SCRABER. TYSTE. SPOTTED GUILLEMOT.
GREENLAND DOVE.

| | |
|---|---|
| *Uria grylle,* | PENNANT. MONTAGU. |
| " *minor,* | STEPHENS. |
| *Cephus grylle,* | FLEMING. |

*Uria*—A bird supposed to be the Guillemot. *Grylle. Grulle*—A groaning sound.

THIS species is found in Europe—in Iceland, Norway, Denmark, Sweden, Nova Zembla, the Ferroe Islands, Spitzbergen, and occasionally in Holland and France. In America it appertains to Greenland and Melville Island, and along the continent occurs about Labrador, Baffin's Bay, and Hudson's Bay, and so on to the United States, Maryland, and other parts.

They have been seen on the shores of Dorsetshire, Hampshire, Devonshire, Durham, Northumberland, the Fern Islands in former years, though their visits there now would seem to be 'few and far between,' and other parts of the country.

These birds are obtained on the Yorkshire coast, but not plentifully; about the year 1816, Arthur Strickland, Esq. shot one out of a small flock in the height of the breeding-season, near the rocks off Flamborough Head. In Cornwall, the bird has occurred at Gwyllyn Vase, but is rare.

The Black Guillemot is a permanent resident at Iona; it also occurs throughout the year in different parts of Scotland, as on Handa, in Sutherlandshire, Inchkeith, and the Isle of May. In Orkney it is very abundant, and a constant inhabitant; as likewise in the Hebrides and the Shetland Islands.

In Ireland, too, it is common, and in the Isle of Man.

[illegible] to build near Terns. [illegible] relates that in the time the species [illegible] along the coasts of the [illegible] a marine bird, and is scarcely ever seen [illegible] for the purpose of incubation.

[illegible] are by no means shy, and may be taken [illegible] eggs with the hand. They associate in a friendly [illegible] among other species as well as among themselves [illegible] are readily tamed. The male and female appear to be [illegible] attached to each other.

This bird is strong and [illegible] on the wing, flying at a [illegible] of the wing, in diving, using its pinions [illegible] as in flight in the air. The Black [illegible] on the water, paddles [illegible] dives with rapidity, opening [illegible] than the other species, and moves under [illegible] They appear to be able to keep [illegible] about two minutes.

[illegible] small fish and crustacea, sea-insects, and [illegible]

[illegible] in the soil.

[illegible] about the middle of March, and the [illegible] the beginning or more usually by the middle [illegible] are hatched in twenty-four days. The bird [illegible] so as to be easily taken on the eggs. Two [illegible] have been known to lay under one piece of [illegible]

[illegible], or rather the bare rock, or a crevice in [illegible] sought for by this species for the purpose [illegible] Hewitson writes as follows: "The place [illegible] a steep precipice to the sea, [illegible] in the rocks, in which [illegible]

Some, says Montagu, used to build near Tenby, in Wales. Pennant, in like manner, relates that in his time the species had several breeding-places along the coasts of the Principality.

It is altogether a marine bird, and is scarcely ever seen on land, except for the purpose of incubation.

These Guillemots are by no means shy, and may be taken off their eggs with the hand. They associate in a friendly manner among other species as well as among themselves. They are readily tamed. The male and female appear to be much attached to each other.

This bird is strong and able on the wing, flying at a low elevation; so it is also, in its way, in diving, using its pinions below the surface, as if in flight in the air. 'The Black Guillemot,' says Macgillivray, 'sits lightly on the water, paddles about in a very lively manner, dives with rapidity, opening its wings a little like the other species, and moves under water with great speed.' They appear to be able to keep underneath for about two minutes.

They feed on small fish and crustacea, sea-insects, and worms.

The note is said to be soft.

This species pairs about the middle of March, and the eggs are laid in the beginning or more usually by the middle of June. They are hatched in twenty-four days. The bird sits very close, so as to be easily taken on the eggs. Two or more couples have been known to lay under one piece of rock.

The bare earth, or rather the bare rock, or a crevice in it, is the only bed sought for by this species, for the purpose of nidification. Mr. Hewitson writes as follows:—'On some of the islands which present a steep precipice to the sea, they make use of holes or crevices in the rocks, in which the eggs are laid at various distances from the mouth of the hole—from one to two feet, which is most usual, to three or four. On other islands less precipitous, it deposits them in cavities under or between fragments of rock and large stones, with which the beach is strewed. In one place several pairs rear their young ones in crannies between the stones which form the ruins of an old wall, on the top of a single rock at sea, and at an elevation of fifty or sixty feet above its surface. The Black Guillemot resorts annually to the same holes.'

The eggs are two in number, and of a white colour, with a tinge of green, spotted, blotted, and speckled more or less with grey, reddish brown, and very dark brown or blackish. Mr. Hewitson has known one of a pink colour.

Both parents attend to the young until able to fly and dive, when they forage for themselves.

Male; weight, about fourteen ounces; length, one foot one and a half to one foot two inches. Bill, black; the mouth inside, orange or yellow red; iris, brown. Head on the crown, neck, nape, chin, throat, breast, and back, brownish black, the lower part with a gloss of green. There is an oval patch of white in front of the shoulder of the wing. In winter, the head on the sides, neck on the back, and nape, have the feathers bordered with white; the chin, throat, and breast, white, intermixed with black. The back, too, has the feathers tipped with white; the lower part white.

The wings reach in extent to one foot ten inches: greater wing coverts, white; lesser wing coverts, partly white, and partly black; the primaries, which are black, are, except the first, tipped with greyish white, the edge of the outer webs of that colour for a third of their length; secondaries, partly tipped with white, the outer web of these also being marked in like manner as the others just described. In winter the white is spotted with brownish black. Tertiaries, greater and lesser under wing coverts, tail, and upper and under tail coverts, brownish black; legs and toes, vermilion, or coral red, with a tinge of orange, the deepest colour in the summer.

The young are at first covered with dull greyish black brown. They next are mottled with black and white feathers.

Sir William Jardine mentions one shot by him in the month of January, which had the head and upper part of the neck clouded with brownish black, the whole of the chin, throat, and breast, white, except the sides of the last-named, which were clouded with brownish black. The back on the upper part, deep brownish black, on the lower part nearly white. The white in front of, and on the wings, clouded with brownish black.

# ROTCHE.

## LITTLE AUK. ICE BIRD. SMALL BLACK AND WHITE DIVER. COMMON ROTCHE.

| | |
|---|---|
| *Uria minor,* | BRISSON. |
| *Alca alle,* | PENNANT. MONTAGU. |
| " " | BEWICK. |
| *Uria alle,* | TEMMINCK. |
| *Mergulus melanoleucos,* | FLEMING. SELBY. |
| " " | JENYNS. |

*Uria*—A bird supposed to be the Guillemot. *Minor*—Lesser.

THESE birds are of true oceanic habits, although, as will be seen, they have in many numerous instances occurred far inland.

They are abundant in Greenland, where they breed, and in different parts of North America, Baffin's Bay, Davis' Straits, and on other parts of the continent, on to New Jersey, and several parts of the United States; also in Europe, at Iceland, in the Island of Grimsey. So, too, in Nova Zembla and Spitzbergen. Captain Beechey, R.N., in the account of his voyage to the North Pole, writes thus of them, in describing the scenery of Magdalen Bay, on the west of the island—'At the head of the Bay there is a high pyramidal mountain of granite, termed Rotge Hill, from the myriads of these, the Rotches, that frequent its base, and which appeared to prefer its environs to any part of the harbour.' He adds, 'they are so numerous, that we have often seen an uninterrupted line of them extending full half way over the Bay, or to a distance of more than three miles. This column, on the average, might have been about six yards broad, and as many deep. There must have been nearly four millions of birds on the wing at one time.'

[illegible] spotted, blotted, and speckled more or less [illegible] and very dark brown or blackish, [illegible] one of a pink colour.

[illegible] to the young until able to fly and [illegible] for themselves.

[illegible] length, one foot one [illegible] two inches. Bill, black; the mouth [illegible] yellow red; iris, brown. Head on the [illegible] throat, breast, and back, brownish [illegible] with a gloss of green. There is an [illegible] in front of the shoulder of the wing, [illegible] on the sides, neck on the back, and [illegible] with white, the chin, throat, [illegible] intermixed with black. The back, too, [illegible] with white; the lower part white.

[illegible] to one foot ten inches; greater [illegible] white; lesser wing coverts, partly white, and [illegible] the primaries, which are black, are, except the [illegible] with greyish white, the edge of the outer webs [illegible] for a third of their length; secondaries partly [illegible] white, the outer web of these also being marked [illegible] as the others just described. In winter the [illegible] with brownish black. Tertiaries, greater [illegible] wing coverts, tail, and upper and under [illegible] black tips and [illegible] or [illegible] [illegible] the deepest colour in the [illegible]

The young [illegible] and greyish black [illegible] with black and white feathers. [illegible] by him in the [illegible] had the head and upper part of [illegible] with brownish black, the sides of the [illegible] white, except the sides of the [illegible] with brownish black. The back [illegible] part, dark brownish black, on the lower part [illegible] The white in front of, and on the wings, [illegible] with brownish black.

# ROTCHE.

LITTLE AUK. ICE BIRD. SMALL BLACK AND WHITE DIVER.
COMMON ROTCHE.

| | |
|---|---|
| *Uria minor,* | BRISSON. |
| *Alca alle,* | PENNANT. MONTAGU. |
| " " | BEWICK. |
| *Uria alle,* | TEMMINCK. |
| *Mergulus melanoleucos,* | FLEMING. SELBY. |
| " " | JENYNS. |

*Uria*—A bird supposed to be the Guillemot. *Minor*—Lesser.

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They are abundant in Greenland, where they breed, and in different parts of North America, Baffin's Bay, Davis' Straits, and on other parts of the continent, on to New Jersey, and several parts of the United States; also in Europe, at Iceland, in the Island of Grimsey. So, too, in Nova Zembla and Spitzbergen. Captain Beechy, R.N., in the account of his voyage to the North Pole, writes thus of them, in describing the scenery of Magdalen Bay, on the west of the island.—'At the head of the Bay there is a high pyramidal mountain of granite, termed Rodge Hill, from the myriads of birds, the Rotche, that frequent its base, and which appeared to prefer its environs to any part of the harbour.' He adds, 'they are so numerous, that we have often seen an uninterrupted line of them extending full half way over the Bay, or to a distance of more than three miles. This column, on the average, might have been about six yards broad, and as many deep. There must have been nearly four millions of birds on the wing at one time.'

Meyer writes, 'the incredible numbers of this species that have been seen by voyagers, on the surface of the northern seas, are very remarkable; it is said that they cover the surface of the water, and the floating masses of ice as far as the eye can discern, and when they take flight they actually darken the sky. This species is so entirely a sea-bird, that it is only seen on land, or in the immediate vicinity of the coast, during the breeding-season, and at other times hardly ever within fifteen or twenty miles from the shore.' They appear not be very shy in their habits.

Occasional specimens occur in hard winters on the coasts of Holland and France.

This small sea-bird has, as just observed, in many instances been found inland after stormy weather. In Yorkshire, near Bridlington they occasionally occur in small flocks. One was taken alive in a farm-yard in the parish of Nafferton, after a severe snow-blast from the north and north-east, on the 24th. of February, 1853, and brought to me.

One, a male, was picked up in the town of Barnsley, in the West-Riding, on the 11th. of November, 1854. Three turned up at Whitby, during the first week in March, 1853. One at Harrogate, on the 10th. of January, 1854; one, October 21st., 1851, at Naburn, on the Ouse, below York, the ancient seat of the family of my friend, the Rev. William Lindsay Palmes, for six hundred years. In 1841, a large flight of these birds crossed the country near Doncaster, and many were found, some dead, and others alive. One near Hebden-Bridge, October 25th., 1834; about the same time one at Luddenden, near there. Several on Foss Island, near York. The species has also occurred at Copgrove, near Knaresborough, as mentioned to Montagu by the Rev. Mr. Dalton. Many off Redcar in 1841, as also all along the coasts of Lincolnshire, Norfolk, Suffolk, Essex, Kent, and Sussex.

In Oxfordshire, one was caught at Salford, near Chipping Norton, in December, 1847; another had been found in an adjoining parish a few years previously. Several have been taken near Oxford. It has also occurred near Newbury, Berkshire.

In Cornwall, one at Plymouth Hoe, in December, 1850; one at Pennance, December 19th., 1846; one in Bream Bay, March 7th., 1847; one also at Gwyllyn Vase. Also on the coast of Devonshire. Montagu records three killed in his time, one on the 4th. of December, 1804, another on the 25th. of November, 1805, and the third on the 17th. of January, 1806. Two have been met with in Falmouth harbour.

One was shot near Dover, in the year 1840, which Mr. Chaffey, of Dodington, has written me word of; and one at Killingholme, Lincolnshire, in 1846, of which Mr. George Johnson is my informant. One was obtained in the vicinity of Ingham, in Norfolk, and one in the same county, shot near Yarmouth, the 24th. of November, 1853, of which Mr. James Hunt wrote to me; one also near Hunstanton, in severe weather in the winter of 1852, of which the Rev. W. C. Fearon, Vicar of that parish, has written me word. One near Cambridge; one, in the severe storm of January, 1854, was found dead upon the ice, in the Lordship of Great Houghton, near Northampton; of this Mr. William Brookes Gates has informed me. Another was caught alive at Wildon, in the same county.

A large flock of these birds visited the Dunbar shore during a severe storm, in November and December, 1846, and one of them is now in my collection, obligingly forwarded to me by R. Gray, Esq., Southcroft, Govan, Glasgow, who procured twenty or thirty specimens. He wrote to me of these, 'Many of them were in a disabled state, and were found in fields and gardens in the neighbourhood. Some were found dead in these situations, small flocks were observed along the shore, and sometimes met with in the harbour, and other smooth water to which they could get access. I had at one time eight or nine individuals in custody. Two of them were very fine specimens. Those in my possession were very pugnacious; between the two I have just mentioned, a sharp fight happened, which was likely to end in the death of the weaker combatant, had they not been separated. The Little Auk is found at the Bass Rock. I saw a specimen there in July, 1851. It is also said to breed at St. Abb's Head.' After the same storm alluded to above, Mr. Edward, of Banff, counted, between the burn of the Boyne and Greenside of Gamrie, a distance of about nine miles, between fifty and sixty of them, which had been cast ashore dead. Another, also recorded in the 'Banffshire Journal' by Mr. Edward, was found alive on a pool of water, in the hollow of a hill, on the west side of the Gallowhill, near Banff, on the 10th. of February, 1852.

One of these birds was picked up in the middle of the city of Durham, not far from the River Wear, in the garden of E. Shepperdson, Esq., on the 26th. of November, 1852. It had apparently just been seized by a cat. In the month of October hundreds appeared off Hartlepool, on the Durham coast, and the birds were in such close flocks, that five or six were killed at a shot. One was seen near Stockton-on-Tees, in the county of Durham, in March, 1853, and another was shot on the River Wear, near Durham, the beginning of December, 1846. In Sussex one was obtained at Crawley the first week in November, 1850, and another near Worthing, shot on the 15th. of November, 1852. In Surrey it has occurred near Godalming. In Somersetshire one at Weston-super-Mare in the winter of 1848-9. In Cambridgeshire one was picked up alive, but in a very exhausted state, at Newmarket Heath, in the month of November, 1849; another between Cambridge and St. Neots, November 21st., 1851. Another was found between Baldock and Royston, in 1846. In Worcestershire one about the same time near Malvern. Nine others have occurred in that county.

They have been met with along the coasts of Essex, Suffolk, and Norfolk. They are extremely uncertain in their appearance. Great numbers appeared off the shore in the month of October, 1841. Three in November, 1853, off Yarmouth, Lynn, and at Norwich respectively. In 1846, specimens occurred at Sculthorpe, on the 3rd. of December; at Norwich on the 5th.; Horsey on the 7th.; Cromer and Stratton-Strawless on the 17th.; and at Salthouse and Fakenham on the 18th. and 19th.; with several others. Four near Downham, near which place one was subsequently obtained in the second week of July in the same year. A few were on sale in the London markets. Three in Shropshire. Others in Bristol and up the Severn. One in Hertfordshire, at Wheathampstead.

In Scotland one was procured by the Rev. Mr. Cunningham, of Prestonpans. It had been taken in an exhausted state by some fishermen; another, also, in November, 1852, in the Firth off Dalmeny Park; another was shot by Robert H. Broughton, Esq. near Cramond, on the Firth of Forth, on the 14th. of February, 1853. In Sutherlandshire the species occurs, but not numerously, in the winter. A very large flock made their appearance in Moray Firth in

December, 1846. 'Every stream and burn falling into the Firth was discovered to have some of these active little divers, and so careless were they of the presence of man, that in some instances they were taken alive, while others are said to have been found in the interior of houses.'

In Orkney they occasionally appear in great numbers during winter. They were unusually abundant in the years 1803 and 1812, in January, in 1846-7, and in 1850-1, in Sanday. They likewise visit Shetland.

In Ireland they occur as stragglers. The late William Thompson, Esq., of Belfast, has recorded their appearance in the counties of Kerry and Wexford.

One cannot help feeling pity for these poor little sea-birds, driven so far from their native places by the unkindly blasts of hyperborean hurricanes, and cast 'lean, rent, and beggared,' on an alien and inhospitable element. It would have been natural to suppose that the ordinary severity of the stormy north would have rendered them proof against the milder winters of our climate, and that our wildest tempests would have seemed to them to blow but as 'gentle gales.' However, from some cause or other, the contrary effect at times takes place; but inasmuch as it is an 'ill wind that blows no one any good,' so we may on the other hand take pleasure in the thought that their having been thus noticed in so many places, shews that there must be in each such case some one or more persons who both observe and record the occurrence of the birds that come in their way. 'Quot avium tot homines.' Every disadvantage is counterbalanced by some advantage; every evil by some good. What applies in the moral world applies equally, in its way, in the natural. 'All things are double one against another,' says the author of the Book of Ecclesiasticus, 'and God hath made nothing imperfect.'

The Rotche is, as already observed, altogether devoted to a 'life on the ocean wave,' where alone it is at home, except indeed during the breeding-season, when, certainly, on the other hand, if never else, it must, in one sense, be allowed to be so. During the remainder of the year it never quits the 'mighty deep,' either in storm or calm, though sometimes, as before shewn, the tremendous gales of the north are too much for even this hardy bird to struggle against. He cannot keep a 'good offing,' where, like the ship, he would be secure, but is forced among the billows and breakers, and is finally cast ashore and wrecked at those tempestuous seasons, when even—

> 'The sturdy rock, for all his strength,
> By raging seas is rent in twain.'

But, except in such extremities, the Little Auk surmounts with ease the summit of the highest wave, or meeting it as it advances, dives through the midst, and emerges safely on the other side to pursue its course over the wild watery waste.

True birds of the ocean, these Auks usually keep to deep sea-water, and approach the shore only during bad weather. They have been noticed on one occasion, in Orkney, on fresh-water lochs.

They fly fast, at a low elevation, and on the land are able to walk about with ease. They can remain below the water for about two minutes.

Their food is composed of small crustacea.

The note of this interesting little bird is a pretty chirrup or pipe, partly plaintive and partly lively; it resembles the syllables 'try' and 'eye,' frequently repeated, especially when engaged with the nest.

The shelter of a chance stone on the earth or rock in some precipitous spot, from whence it can readily drop into the water, or take flight, is all that the Little Auk thinks it necessary to seek or provide in the shape of a nest, unless some cavernous hollow present itself, and this, if suitable, will be taken advantage of by several individuals.

The egg of this small sea-bird is of an uniform pale bluish green; some specimens are spotted with rust-colour. It is of an oval shape, and the ends obtuse.

Several of these birds build in company, from fifty to a hundred or so.

'While one of the parent birds sits on the eggs, the other may be seen close by, perched on a rock or stone. The young do not leave the nest before they are fully fledged.'

Male; length, about eight inches and a half, or eight and three quarters to nine; the bill is black, short, and thick; both mandibles are notched, and there are two slight furrows on the upper one. Iris, dark brown; over it is a small white spot or speck. Head on the crown, which is flat in shape, neck, nape, chin, and throat, deep glossy velvet black;

in winter the sides of the head, as also the chin and throat, are white, the first-named streaked with dusky, going backwards, and forming an indistinct narrow band at the back of the head; and in the double moult in spring and autumn, to which these birds are subject, mottled with black and white; breast, white, with a few blackish brown streaks below on the sides, the inner webs of the feathers being of that colour. Back, glossy velvet black.

Greater and lesser wing coverts, dull black; primaries, dull black; secondaries, dull black, the tips white, forming a narrow band or streak across the wing; tertiaries, dull black; greater and lesser under wing coverts, white. Tail, glossy brownish black; tail coverts, glossy brownish black. Legs and toes, yellowish olive brown, otherwise described as blackish brown with a tinge of red. Webs, darker yellowish olive brown.

Temminck points out that the young birds of the year may be distinguished by having the sides of the head clouded with grey.

The figure of the present species is from a drawing made by John Gatcombe, Esq., of Wyndham Place, Plymouth; I have also been favoured with a drawing by Theodore Compton, Esq.

# PUFFIN.

COULTER-NEB. SEA-PARROT.

| | |
|---|---|
| *Mormon fratercula,* | GOULD. TEMMINCK. |
| *Alca arctica,* | PENNANT. MONTAGU. |

*Mormon*—A hobgoblin. *Fratercula*—..........?

In giving to the world this my 'Book of Mormon,' the historical part is illustrated by a figure which, though not one of the 'Golden Plates,' will, I hope, more truly corroborate the fidelity of the account I furnish from the salt sea, than did those of the impostor of the 'Salt Lake' that which he gave to the deluded followers of his wretched deception.

The Puffin is extremely abundant in Iceland, Lapland, and Norway, as well as in other parts of Scandinavia, and thence goes north to the Faroe Islands, Nova Zembla, and Spitzbergen. In America, it belongs to Labrador, Baffin's Bay, Hudson's Bay, and many other parts, advancing southwards as far as Georgia.

It is taken on the French, Spanish, and Dutch coasts, and has occurred in Italy—a single specimen in the year 1823.

They are seen in immense multitudes in the Shetland Islands, and not a few resort annually to the Fern Islands, on the coast of Northumberland.

In Yorkshire, the Puffin is common at Flamborough. One of these birds was found dead in Whitecliff Bay, Isle of Wight, Hampshire, on the 4th. of January, 1853, after some stormy weather; others have been observed on the coast; one also on the 3rd. of that month in Seaford Bay, Sussex, where several had been procured the previous December. In

Dorsetshire, one was taken on the rocks under Portland in January, 1836; five others were found dead on the Chesil bank, on the 27th. of February, in the same year, after gales from the south-west. Likewise in February and March, 1859, the Norfolk coast about Wells, Blakeney, and Morston, was strewed with dead Puffins. They are occasional visitants to Yarmouth, Norfolk, and the coast, in autumn. One was caught near Ely, Cambridgeshire, in a fen, the 15th. of February, 1832.

In Cornwall one was shot on the beach near Falmouth, January 27th., 1859; one near St. Looe, in March, 1846, and another in January, 1846. It has occurred also at Gwyllyn Vase and Swanpool: but the species is not common: it is said to be more numerous at the Scilly Islands. In the county of Berks, a specimen of this bird was taken alive in Northbrook Street, Newbury, March 10th., 1816.

In the 'Magazine of Natural History,' volume i., there is a statement made by Mr. Edwin Lees, of Worcester, of his having been informed that Puffins 'once upon a time,' used every year to visit a pool in Westwood Park, near Droitwich, Worcestershire, the seat of Sir John Pakington, Bart.; but I can hardly conceive but that some other bird must have been intended by his informant.

In Scotland, in Sutherlandshire, the Puffin is numerous on islands, and other parts; likewise at Puffin Island, in the Firth of Forth; the Bass Rock, off East Lothian, and others of the Scottish Islands. So also in the Orkneys they are very abundant, but only throughout the summer, moving southwards as winter is about to commence. In the Shetland Islands too, they are to be seen in immense numbers, as also at St. Kilda and the Hebrides generally.

They are common birds in Ireland, and have breeding-haunts around the coast. They resort to Anglesea and Priestholm, just off its coast, as also to different parts of Wales, as at St. Margaret's Island, near St. David's; likewise to the Isle of Man.

They move northwards early in April, and depart towards the latter end of August, or beginning of September, according as they are farther north, or south. Selby writes, 'It is only known to us as a summer visitant, and that from the north, making its first appearance in the spring, at the breeding-stations, about the middle of April, and generally departing between the 10th. and 20th. of August.

# PUFFIN.

## COULTERNEB. SEA-PARROT.

*Mormon fratercula*, GOULD. TEMMINCK.
*Alca arctica*, PENNANT. MONTAGU.

*Mormon*—A bugbear. *Fratercula*—......?

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In Cornwall, one was shot on the beach near Falmouth, January 27th., 1850; one near St. Looe, in March, 1845, and another in January, 1846. It has occurred also at Gwyllyn Vase and Swanpool, but the species is not common: it is said to be more numerous at the Scilly Islands. In the county of Berks, a specimen of this bird was taken alive in Northbrook Street, Newbury, March 16th., 1816.

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These curious and grotesque-looking birds are able to inflict a severe bite with their strong bills. They assemble in their native countries in such vast numbers, that Mr. Hewitson describes a flock seen at the distance of a mile as having the appearance of a dark cloud.

They sit on the ledges of the rocks in long rows, bowing towards each other, and putting themselves into various amusing attitudes. They are restless birds, and continually keep moving or looking about, turning the head first in one and then in another direction. They are rather wary, and take wing or dive on the approach of suspected danger; they are, however, readily tamed, and soon become familiar. Like the next species, whose cognomen sufficiently indicates the keenness of its bite, the vernacular name of the one before us bespeaks the fact that its neb or bill is as strong and sharp as a coulter.

The Puffin has but indifferent capabilities for walking, leaning on the whole length of the leg and foot, but swims and dives well. It also flies swiftly, in general, for a moderate distance, but for some miles on occasion, and in a straight direction near the water, the wings being opened wide and quickly beaten.

Their food consists of sprats and young fish, sea-insects, and the smaller crustacea—shrimps, crabs, and others, as also, it is said, sea-weed.

The note is a low 'orr,' 'orr.'

The Puffin breeds in precipitous places on the coast and its adjacent islands, seeming to give a preference to such as are covered with a formation of mould. The nest is made both on cliffs and high rocks, and the short verdure which obtains on any level places on the sides or summit of such. These birds either take possession of a rabbit-burrow, often contending with the proper owners for it, or dig a hole themselves, as a receptacle for their eggs, frequently to the depth of three feet, and often in a curving direction, and with two entrances. A natural cranny or fissure in the rock will equally serve the purpose, or a time-worn hole in an old wall or ruin.

The egg is deposited at the farther end. Mr. Selby adds that when engaged in digging, which operation is generally performed by the males, they are sometimes so intent upon their work, as to allow themselves to be taken by the hand; and the same may also be done when the bird is sitting on its egg. The young are hatched after a month's incubation. In about a like period of time, or a week or two more, they come to their full feathers, and are able to quit their native burrows, and enter on their ocean of life. Meyer says that where both birds have been killed, others have been known to take charge of the egg or young.

Only one egg is laid, and its colour is white, sometimes spotted with pale grey.

These birds begin to assemble in April, and the building-time is at the end of May or beginning of June.

Male; weight, between twelve and thirteen ounces; length, one foot to one foot one inch. The bill, which derives its name from a fancied resemblance between its curious shape and the coulter of a ploughshare, is of several colours, the bare part about the mouth, which projects a little both above and below, yellowish white, the next portion bluish grey, followed by orange red, and this again by bright red. The upper mandible, which corresponds in colour with the lower, has three grooves, and the lower one two. It is slightly hooked. It would appear that the bill does not attain its full size till the third year. In winter it is more dull in colour. The sides of the mouth are orange yellow. Iris, grey, the eyelids reddish orange. There is a small protuberance of a grey colour, and of an oblong shape, attached to the lower one, and another of a triangular shape to the upper. Behind the eye the feathers are divided, forming a narrow line or streak which reaches to the back of the head. Forehead, black; head on the sides, white, or greyish white, darkest immediately behind the eye, the feathers full. In winter, the sides of the head are leaden grey, darkest over the base of the lower mandible. Crown, back of the head, neck, and nape, black, the first-named tinged with grey; chin, greyish white, or white, darkest on the sides; the throat exhibits a band of deep black, tinted with grey, which joins the former colour on the nape; breast, white; back, black, darkest on the middle part.

The wings expand to the width of one foot nine inches; greater and lesser wing coverts, glossy black; primaries, dusky black, but paler than the secondaries, which are also black; tertiaries, black. The tail consists of sixteen feathers. It is short, and black in colour. Upper tail coverts, black; legs and toes, bright orange red; claws, black, the inner one much hooked; webs, orange red.

The female is as the male in plumage and appearance.

The young, which are at first covered with blackish down on the upper part, have the head, neck on the back, and nape, and the back and tail, dusky.

Varieties of this bird have been known. Some quite white have been noticed, and one was seen by Mr. Neill, which had only two or three black feathers on the back.

# RAZOR-BILL.

RAZOR-BILL AUK. BLACK-BILLED AUK. AUK. MURRE.
FALK. MARROT. SCOUT.

[illegible] torda, PENNANT. MONTAGU. EYTON.
[illegible] pica, MONTAGU. BEWICK.

[illegible] *Torda*—Tjeste, a corruption from Tord—stow.

This bird is plentiful on the shores of the islands in the [illegible] seas of Europe, Asia, and America, from Canada, [illegible], and Greenland, to Iceland, Norway, and Kamtschatka. It is seen also in Denmark, Holstein, Prussia, France, [illegible] Spain, and has occurred on the northern coast of Africa, [illegible] at Tangiers. In America a few occasionally go as [illegible] south as New York.

[illegible] Razor-bill breeds in Yorkshire, at Flamborough Head, [illegible] well-known promontory near Bridlington; also on the [illegible] Islands. It occurs occasionally at Yarmouth, Norfolk, [illegible] along the coast, the young birds more commonly, and [illegible] old ones less so, at all times of the year except in [illegible]

[illegible] species has occurred in Oxfordshire—the bird I have [illegible] of the [illegible] is [illegible] [illegible]

[illegible] orange-red; claws, black, the lower one tinged [illegible].

[illegible] the male in plumage and appearance.

[illegible] are at first covered with blackish down [illegible] have the head, neck on the back, and [illegible] and tail, dusky.

[illegible] have been known. Some quite white [illegible] and one was seen by Mr. Neill, which [illegible] three black feathers on the back.

# RAZOR-BILL.

RAZOR-BILL AUK. BLACK-BILLED AUK. AUK. MURRE.
FALK. MARROT. SKORT.

| | |
|---|---|
| *Alca torda,* | PENNANT. MONTAGU. BEWICK. |
| " *pica,* | MONTAGU. BEWICK. |

*Alca*—..........? *Torda*—Quære, a corruption from *Tarda*—slow.

THIS bird is plentiful on the shores of the islands in the Arctic seas of Europe, Asia, and America, from Canada, Labrador, and Greenland, to Iceland, Norway, and Kamtschatka. It is seen also in Denmark, Holstein, Prussia, France, and Spain, and has occurred on the northern coast of Africa, namely, at Tangiers. In America a few occasionally go as far south as New York.

The Razor-bill breeds in Yorkshire, at Flamborough Head, the well-known promontory near Burlington; also on the Fern Islands. It occurs occasionally at Yarmouth, Norfolk, and along the coast, the young birds more commonly, and the old ones less so at all times of the year except in summer.

This species has occurred in Oxfordshire—for this I have the authority of the Hon. T. L. Powys. In Cornwall it is not uncommon near Gwyllyn Vase, Swanpool Bay, and Falmouth. One found dead by Mr. Cocks on the 3rd. of January, 1849. A young bird was shot there by Mr. May, January 9th., 1849. In Hampshire it has occurred at the Isle of Wight.

In February and March, 1853, the beach about Morfa, Bychaw, and Harlech, in North Wales, was strewed with dead birds of this kind.

It is plentiful in the Orkney and Shetland Islands, also in Scotland, in Sutherlandshire, about Handa and other parts. Many migrate southwards in the winter from the more northern parts, and these in turn are succeeded by others from still colder regions.

They are common in Ireland.

The Razor-bill is a migratory species, and begins to move southwards about the end of September, continuing its travels through November and December, according as the weather up to that period has been more or less severe. In March and April it returns northwards again. According to Meyer, 'During these migrations an interesting circumstance may be observed, namely, that when the several divisions or groups of a flock descend upon the sea to rest themselves, the parties that are behind alight some distance in advance of those that first settled, so that when the first-arrived parties have recruited their strength, and taken wing again, the later-arrived groups having alighted so much in advance, have had time to rest themselves also, and are prepared in their turn to follow in the train of their former leaders as soon as these have passed over.'

They may often be seen far from land, 'cœlum undique et undique pontus.' The parent birds appear to be much attached to their young.

They fly strongly, rather fast, and well, but near the surface of the water, rising up only to gain a rock or cliff, the wings being quickly beaten. The birds that compose a flock keep at some distance from each other. On the land their motions are awkward and slow, and if pursued they make use of their wings to further their advance. They swim and dive with great ability.

They feed on young herrings, sprats, and other small fish, as also on crustacea, obtained by diving to a considerable depth.

The note is likened to the syllables 'arr' and 'orr.'

Any slight hollow or cranny in a rock of the cliff overhanging the sea, or even the bare unsheltered surface of the rock itself, a preference being given to the most precipitous places, is chosen by the Razor-bill as a deposit for its single egg. This in the month of April. Even here, however, it is exposed to accidents of different kinds, and is not unfrequently thrown down by a high wind, or some other bird, great numbers frequenting, from the like causes of predilection, the same breeding-places, or is broken by a chance stone or mass of earth dislodged from above: such landslips overwhelm also, at times, the bird herself.

The old birds shew much attachment to their young. The latter are able in July to provide for themselves, but the descent to the sea is not always accomplished with safety. It sometimes happens that in throwing themselves down from the edge of the cliff, to which they are led by their parents, and instructed, as it were almost what to do, they fail in clearing every obstacle below, and the force of the fall in such case is fatal. They lay towards the end of May or the beginning of June.

The egg is subject to almost endless variety. Its prevailing colour is white, blotted and spotted with blackish brown and reddish brown.

Male; weight, about twenty-seven ounces; length, one foot five inches or over; bill, black, with three grooves following the profile of the front of the upper mandible, and one white curved streak arising from it and meeting the like one on the opposite side, and two grooves and a white line on the lower one; from the top of the base of the upper bill a clear streak of white slants backwards and upwards to the eye. The bill is much hooked at the tip; the inside of the mouth is yellow; iris, dark brown. Head on the sides, paler, and on the crown, neck, and nape, darker brownish black, becoming more brown in tint as the summer advances. Chin and throat, the same, but paler. Breast, white; back, deep brownish black.

The wings expand to the width of two feet three inches; greater and lesser wing coverts, black; primaries, black, the outer webs with a shade of grey; secondaries, black, tipped with white, which forms a narrow streak across the wing; tertiaries, black; greater and lesser under wing coverts, white. The tail is wedge-shaped, the two middle feathers being considerably longer than the others, and narrowed towards the tip; upper tail coverts, black; under tail coverts, white. Legs and toes, dusky black; webs, dusky black.

The female is of like plumage as the male.

The young bird at first has the bill plain, and is without the white line between the bill and the eye, but acquires it, though indistinctly, the end of the year. Head and crown, dull black, streaked with a few plumes of white. The sides of the head, chin, and throat are white, and the neck in front is streaked with a few black filaments, and behind with a few white ones. Back, dull black.

# GREAT AUK.

## GAIR-FOWL. NORTHERN PENGUIN.

*Alca impennis,* PENNANT MONTAGU. BEWICK. FLEMING.
" " SELBY. JENYNS. GOULD. TEMMINCK.

*Alca*—...........? *Impennis*—Wingless.

THIS great bird appears to belong exclusively to the extremest polar regions, few wanderers having found their way to more habitable lands; and even where it was formerly known, it seems now to be extinct.

In Europe it used to be seen on the Iceland and Ferroe waters, and on the coast of Norway; so also at Spitzbergen. In America, one was obtained at sea, over a fishing bank, about a hundred leagues from Newfoundland; it is said to have been formerly of more frequent occurrence in those parts, and indeed from Labrador to Boston. In ancient times the present was a Greenland species, but it is long since one was seen there.

The instances of the occurrence of the Great Auk in this country have been but very few. Sir William Hooker has mentioned one specimen obtained near Southwold, in the county of Suffolk; Mr. Bullock another taken on a pond on the estate of Sir William Clayton, Bart., near Marlow, Buckinghamshire; and Dr. Edward Moore has recorded one found dead on Lundy Island in the Bristol Channel, off the north coast of Devon, in the year 1829.

In the Hebrides, one was taken at St. Kilda in the winter of 1822; another in 1829: the latter escaped from confinement. Mr. John Macgillivray writes, speaking of the year 1840, 'The Great Auk was declared by several of the inhabitants to be of not unfrequent occurrence about St. Kilda, where, however, it has not been known to breed for many years past. Those of few specimens only have been procured on it by the industry of the recent inhabitants.

In Orkney, Mr. Robert Heddle wrote, 'This bird has not visited Orkney for many years. One was seen off Fair Isle in 1798; a pair lived in Papa Westray for several years, where they were called the king and queen of the Auks. Shortly after Mr. Bullock's visit to Orkney, in 1812, one of these birds was shot and sent to him, and since that time the Great Auk has apparently forsaken our islands.'

In Ireland, this very fine bird has occurred, but very rarely. One was taken off the coast of the county of Waterford in the year 1834.

One such has been kept in confinement for some time.

The short wings of these Auks, though inadequate to support them in the air, render them material assistance in their progress beneath the surface of the water, and there they pursue, it is related, with wonderful rapidity; and in consequence are usually seen. Being thus unable to fly, it would appear that they raise themselves to their breeding-places on low rocks by the aid of the waves which dash incessantly against the desolate shores which they frequent. On the land they walk but slowly, and use their wings to help them forwards. They are not shy or easily alarmed, the result no doubt of their having been accustomed to live in security in their remote quarters.

They feed on fish, and, some say, on sea plants.

The Great Auk hatches its egg on the bare ground, close above the sea-board, or in the clefts of rocks. This in the month of June.

The egg is yellowish white, streaked and spotted, principally about the larger end with black.

[illegible]

[illegible]

# GREAT AUK.

## GAIR-FOWL. NORTHERN PENGUIN.

*Alca impennis.* PENNANT. MONTAGU. BEWICK. FLEMING. SELBY. JENYNS. GOULD. TEMMINCK.

*Alca*—[illegible]. *Impennis*—Wingless.

This great bird appears to belong exclusively to the extremest polar regions, few wanderers having found their way to more habitable lands; and even where it was formerly known, it seems now to be extinct.

In Europe it used to be seen on the Iceland and Ferroe waters, and on the coast of Norway; as also at Spitzbergen. In America, one was obtained at sea, over a fishing bank, about a hundred leagues from Newfoundland: it is said to have been formerly of more frequent occurrence in those parts, and ranged from Labrador to Boston. In ancient times the species was a Greenland species, but it is long since any was seen there.

The instances of the occurrence of the Great Auk in this country have been but very few. Sir William Hooker has mentioned one specimen obtained near Southwold, in the county of Suffolk; Mr. Bullock another taken on a pond on the estate of Sir William Clayton, Bart., near Marlow, Buckinghamshire; and Dr. Edward Moore has recorded one found dead on Lundy Island in the Bristol Channel, off the north coast of Devon, in the year 1829.

In the Hebrides, one was taken at St. Kilda in the winter of 1821, another in 1829: the latter escaped from confinement. Mr. John Macgillivray writes, speaking of the year 1840, 'The Great Auk was declared by several of the inhabitants to be of rare and uncertain occurrence about St. Kilda, where however, it has not been known to breed for many years back; three or four specimens only have been procured during the memory of the oldest inhabitant.'

Dr. Baikie and Mr. Robert Heddle write, 'This bird has not visited Orkney for many years. One was seen off Fair Isle, in June, 1798; a pair bred in Papa Westray for several years, where they were named the king and queen of the Auks. Shortly after Mr. Bullock's visit to Orkney, in 1813, one of these birds was shot and sent to him, and since that time the Great Auk has apparently forsaken our islands.'

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The short wings of these Auks, though inadequate to support them in the air, render them material assistance in their progress beneath the surface of the water, and there they proceed, it is related, with wonderful rapidity; and in swimming are equally adept. Being thus unable to fly, it would appear that they raise themselves to their breeding-places on the rocks by the aid of the waves which dash without ceasing against the desolate shores which they frequent. On the land they walk but slowly, and use their wings to help them forwards. They are not shy or easily alarmed, the result no doubt of their having been accustomed to live in security in their remote quarters.

They feed on fish, and, some say, on sea-plants.

The Great Auk hatches its egg on the bare ground, close above the sea-board, or in the clefts of rocks. This in the month of June.

The egg is yellowish white, streaked and spotted, principally about the larger end, with black.

These eggs may be said to be 'worth their weight in gold;' I know of about sixty guineas having been given for a pair.

Male; length, two feet eight or ten inches, Montagu says as much as three feet; the bill, which is flattened at the sides, and marked with several transverse grooves, is very strong, and black in colour, the grooves white; between it and the eye, and around the latter, is a large oval patch of white; the base of the bill is covered with short velvet-like feathers. Iris, reddish brown; head on the crown and sides, neck, nape, chin, and throat, deep glossy black; the two latter and the sides of the head are white in autumn and winter. Breast, white; back, glossy black.

Greater and lesser wing coverts, black; primaries, black, the longest quill feather is only four inches in length; secondaries, black, their tips white, forming a boundary to the wing; tertiaries, black; greater and lesser under wing coverts, white. Tail, black; upper tail coverts, black; under tail coverts, white. The legs, short, and placed far back, are, as the toes and claws, blackish; webs, blackish brown.

Selby says that this species undergoes a double moult, and Dr. Fleming noticed that the change took place in a few days.

In the young bird it would appear that the bill becomes only gradually grooved, and the neck is mottled with black and white.

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